

# COMBATING THE BP OIL SPILL

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## HEARING

BEFORE THE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT  
OF THE

COMMITTEE ON ENERGY AND  
COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

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## COMBATING THE BP OIL SPILL

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THURSDAY, MAY 27, 2010

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT,  
COMMITTEE ON ENERGY AND COMMERCE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 2:09 p.m., in Room 2123, Rayburn House Office Building, Hon. Edward J. Markey [chairman of the subcommittee] presiding.

Present: Representatives Markey, Inslee, Butterfield, Melancon, McNerney, Dingell, Green, Capps, Harman, Baldwin, Matheson, Barrow, Waxman (ex officio), Upton, Stearns, Shimkus, Blunt, Pitts, Bono Mack, Sullivan, Burgess, Scalise, Griffith, and Barton.

Also Present: Representative Castor.

Staff Present: Phil Barnett, Staff Director; Bruce Wolpe, Senior Advisor; Greg Dotson, Chief Counsel, Energy and Environment; Joel Beauvais, Counsel; Michal Freedhoff, Counsel; Melissa Cheatham, Professional Staff Member; Caitlin Haberman, Special Assistant; Meredith Fuchs, Chief Investigative Counsel; Karen Lightfoot, Communications Director, Senior Policy Advisor; Elizabeth Letter, Special Assistant; Jen Berenholz, Deputy Clerk; Mitchell Smiley, Special Assistant; Mary Neumayr, Minority Counsel; Aaron Cutler, Minority Counsel; Peter Spencer, Minority Professional Staff Member; Andrea Spring, Minority Professional Staff Member; and Garrett Golding, Minority Legislative Analyst.

### **OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS**

Mr. MARKEY. Good afternoon. It is day 38 of the BP oil spill disaster. Over these 38 days, BP has misled the public on the amount of oil spewing into the ocean. They waited until day 23 to release a 30-second clip of the oil spill. They waited until day 31 to release a live feed of the spill. They continued to use dispersants that EPA has directed them to replace. And while we all hope that the top kill is successful, it is one of several untested strategies to address oil leaks at this depth, signaling BP's utter lack of preparedness.

Through BP's obfuscation of the truth, the Federal Government has been working to determine the impacts of the spill and to mitigate the damage done to our environment, economy, and coastal communities. This is BP's spill, but it is America's ocean.

After the initial explosion of the oil rig on April 20, the Coast Guard was first on the scene for a search and rescue operation that

saved the lives of 115 workers. The administration immediately established a command center.

A day after the explosion, the Coast Guard, EPA, and the Departments of Interior, Commerce, and Homeland Security joined State and local groups to coordinate resources and oversee BP's response.

Within a week, Secretary Napolitano and Secretary Salazar signed on to an order for a joint investigation to determine the causes of this disaster.

Homeland Security designated this event as a spill of national significance to fully leverage resources for the Federal Government's response.

The Department of Commerce declared a fishery disaster in the Gulf to mobilize assistance to fishermen and fishing communities.

NOAA has taken a lead role in evaluating the impacts of oil on marine resources and advising cleanup efforts.

EPA has been monitoring air quality and has directed BP to use less toxic and more effective dispersants.

However, in addition to the spill under the sea surface, we are also confronting the spillover from the Bush administration. This culture was established during the Bush administration when it compromised the Minerals Management Service, or MMS, responsible for offshore drilling oversight.

On Tuesday, the Department of Interior released a report detailing how during the Bush administration MMS personnel routinely accepted expensive gifts from the very people they were supposed to be regulating. The Obama administration has responded with a plan to fundamentally restructure the MMS into separate entities for leasing, safety, and revenue collection, with independent missions to strengthen oversight of offshore energy operations. Any changes in MMS personnel will not change their dedication to effective oversight of our energy resources.

Congress has also been working to determine the causes and consequences of this disaster, holding the companies involved accountable. BP, Halliburton, and Transocean have been questioned about the events leading to the accident. Chairman Waxman and Chairman Stupak are leading that investigation, and they will get to the bottom of what efforts were actually taken to stop the leak and attempts to clean up the mess.

Ocean experts have testified to the effects of the oil on marine ecosystems. I sought and succeeded in making BP's live feed from the ocean floor available to the public, working with members of this committee.

For years, the oil industry told us an oil spill was impossible. Then they said stopping the leak is mission impossible. It is clear that BP was unprepared for this.

America is looking to the administration to provide oversight and to prevent this from ever happening again. There has been an impressive Federal response. To date, the Federal Government has deployed 1,300 vessels, over 1.85 million feet of containment boom, and directed 22,000 Federal employees to work on the BP oil spill.

As this work continues, we must realize that we cannot drill our way to energy independence. We have 2 percent of the world's oil reserves, 5 percent of the world's population, and we consume 25

percent of the world's oil on a daily basis. The BP oil disaster is another reminder that we must move to a clean energy future, buoyed by increased fuel economy, wind, solar, hydropower, and efficiency and other technologies that can help us in the long run to avoid this ever happening again.

Let me turn now and recognize the ranking member of the subcommittee, the gentleman from Michigan, Mr. Upton.

**OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. UPTON. Thank you, Mr. Chairman. I do appreciate you calling this hearing today.

We are all outraged and saddened by the disastrous oil spill in the Gulf that left 11 dead and has spread untold barrels of oil into the sea. It is a very, very tragic event for our country. I would hope to see more hearings from this committee so that we can get answers and the companies involved—from both the administration as well as the companies involved about what happened, how we can fix it, and how we can ensure that a disaster like this cannot and does not happen again.

It is not time for knee-jerk policy reactions but for answers. We must first determine what caused the accident and how we can prevent similar accidents from happening in the future.

Second, we need to make sure, crystal clear to all involved, that the polluter will pay. The American taxpayers should not be on the hook for a dime for the cost of this accident.

I was a member of the Conference Committee for the Oil Pollution Act of 1990. There is no doubt in my mind that the President and his administration have both the authority and the obligation to take control of the crisis. Clearly, from where we stand today, it has not happened.

The spill from the Deepwater Horizon rig a month ago is the first major spill since enactment of the 1990 law. The Oil Pollution Act gives the President the authority to oversee the cleanup managed by the responsible party or federalize the efforts. It is the obligation of this committee and the Congress to scrutinize what procedures were taken by BP and the Obama administration and how these actions or inactions led to the mess that we see today. Hind-sight is 20/20, but lessons can be learned and applied in the future.

The Coast Guard has been charged with a Herculean task. However, I am concerned that the delays of the administration have set them up for failure. For example, it was 9 days after the accident before the administration tapped the Department of Defense to assist by deploying needed equipment to combat the spill site a mile underneath the water surface.

I am also particularly interested in the Coast Guard's delay of initiating the controlled burn of the surface oil immediately after the spill occurred. It appears that there could have been a delay in using that tactic because of air pollution concerns.

Was EPA involved in that decision or the delay? Did CO<sub>2</sub> or climate change concerns play a role in that decision?

Additionally, why were chemical dispersants that make oil less harmful to the environment not fully used from the onset? Again,

was this due to environmental concerns that may not have been warranted in that instance?

Unfortunately, this is not the first safety or environmental problem that we have seen from BP. Clearly, they were not prepared to deal with a leak 5,000 feet below the sea. There is plenty of blame to go around, but as The Washington Post indicated this week, you cannot plug a well with regulation, speeches, or paper.

There has not ever been a disaster like this in the 30 years that they have been drilling in the deep water or the Gulf. After such a stellar safety record, you would start to think that things like this could not happen.

While we can't turn our back on offshore drilling, we need to do a much better job and be prepared for the future. We need to do what we can to prevent this from ever happening again and, at the same time, be prepared for the worst. I look forward to the testimony and interaction.

I yield back my time.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the gentleman from full committee, the gentleman from California, Mr. Waxman.

**OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. WAXMAN. Mr. Chairman, it is now 5 weeks since the Deepwater Horizon disaster; and each day brings more discouraging news of the devastating impact this oil spill is causing to the economy, to the environment, and the people of the Gulf Coast region. Each day we are learning more about the cascade of mistakes and misjudgments that caused this catastrophe.

On Tuesday, May 25, committee staff received a briefing from BP officials, including the Group Vice President For Safety and Operations and the leader of BP's internal investigation. BP shared with the committee a 48-page document summarizing the company's interim incident investigation, and I ask that this document be made part of the hearing record.

Mr. MARKEY. Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. WAXMAN. We learned a great deal from that presentation about BP's preliminary observations of possible causes of the blowout and explosion at the Deepwater Horizon drilling rig in the Gulf of Mexico. We summarized this in a memorandum that Chairman Stupak and I released on Tuesday.

What we are now learning is that BP's investigation appears to omit key issues. There have been several reports today concerning questionable well design choices made by BP, including the decisions to use a type of casing that could allow gas to flow up the annular space to the wellhead to limit the number of spacers centering the casing, despite objections by Halliburton, and to curtail the length of time that drilling fluids were circulating to clean gas out of the well. Yet none of these issues were mentioned by BP when they briefed our staff. That raises the possibility that BP's internal investigation is not examining the consequences of BP's own decisions and conduct.

Our investigation is examining all potential causes of the blow-out, including the responsibility of BP. That is why we are sending a letter to BP today seeking more information on these issues.

I want to thank Chairmen Markey and Stupak for their leadership in this investigation. The committee's first hearing was held by the Oversight and Investigations Subcommittee on May 12 where Chairman Stupak revealed new information about problems with the blowout preventer. Chairman Markey has led the way in Congress in investigating the amount of oil coming from the well and providing video feeds of the leak.

Our next hearing will be a field hearing by the Oversight and Investigations Subcommittee in Chalmette, Louisiana, on Monday, June 7, 2010, at 10:00 a.m., where we will explore some of the impacts of this oil spill. We will continue a broad and aggressive investigation throughout the month of June.

I pray that the efforts today will seal up this well and stop the damage that is being done. But that can't be the end of it. We have got to make sure that this kind of disaster never happens again and we know what went wrong so we can hold the proper parties responsible.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the ranking member of the full committee, Mr. Barton from Texas.

**OPENING STATEMENT OF HON. JOE BARTON, A  
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. BARTON. Thank you, Mr. Chairman; and I thank you and Chairman Waxman for asking our witnesses to come today and holding this hearing at this important time.

As we speak, it is unclear whether the so-called top kill procedure has been successful, but it does appear that it has been at least partially successful, and hopefully we will know by the end of the day that it has been totally successful.

No one can bring back the 11 individuals who lost their lives on the drilling rig back in April. We can't put the oil that has been spilled back into the reservoir, but perhaps, if we work together, we can find out what caused the problem, what can be done to fix the problem right now, and what can be done to prevent it in the future.

I am disappointed with the President's decision today to stop drilling in the deep Gulf and in Alaska. I think putting our drilling programs in those areas in a deep freeze is exactly the wrong approach. All we are going to do is cause unemployment and cause the price of oil to go up, which is going to hurt our economy even more, and we are already hurting with almost 10 percent unemployment. So I think that the President has made a decision that will come back to hurt this country.

I want to make one thing perfectly clear, Mr. Chairman. Under current law, the President is in charge of this cleanup. This accident occurred in the Federal waters in the Gulf of Mexico outside the State limits. We have a law that makes the President in charge from day one.

I do think the President made the right decision to put British Petroleum in charge of day-to-day decision making under the supervision of the Coast Guard, the EPA, the MMS, and other Federal agencies. It is BP's responsibility. They are the primary owners of the well, and I don't second-guess that decision at all.

But, make no mistake, there has not been one decision that I am aware of, unless some of the panelists tell us so today, that BP or Halliburton, Transocean or Cameron has made that wasn't acknowledged by Federal officials and wasn't approved by Federal officials.

And, again, it is real easy to sit up here on the podium, Mr. Chairman, and second-guess. I went down to Louisiana with you and others of this committee and went to the command site and then went out and overflowed the accident site. It is tough to be there and have to make decisions on what to do when there is no easy, obvious answer. So I don't think it is fair to second-guess some of the decisions that have been made.

But I think it is fair, if you are going to try to pin the blame on somebody, as President Truman said, "The buck stops here." And under current Federal law, the President of the United States is ultimately in charge.

It is not BP that has not given the OK to build the berms down in the State of Louisiana that the Corps of Engineers until today had been sitting on for a month. That was not a BP decision.

It is not a BP decision to be using one dispersant and then be told by the EPA to use another and then be told again to go back and use the other dispersant. In fact, while it was a BP recommendation to use dispersants to try to keep the oil under the surface, that in itself I understand could be a controversial decision. That was a decision that was ultimately approved by the Environmental Protection Agency.

I think, Mr. Chairman, that this committee, under the leadership of Mr. Stupak and yourself and Mr. Waxman, with the help from Dr. Burgess and Mr. Upton and myself, have conducted a fair investigation.

My position on this is pretty straightforward. Let's stop the spill, and hopefully today we will accomplish that. Let's soon clean up the damage. And I know everybody is trying to do that. Let's conduct a fair, fact-based investigation and, based on that, decide what policies need to be changed, what best practice procedures need to be changed to prevent a situation like this from happening in the future.

If we do that, Mr. Chairman, while this, again, is a tragic accident, 11 people have lost their lives, hundreds of thousands of barrels of oil have been spilled into the Gulf, our ecology has been impacted, our economy has been impacted, if we learn from this, though, we can hopefully prevent it from happening in the future.

And, with that, Mr. Chairman, I yield back.

[The prepared statement of Mr. Barton follows:]



**Opening Statement of the Honorable Joe Barton  
Ranking Member, Committee on Energy and Commerce  
Subcommittee on Energy and Environment Hearing on  
Combating the BP Oil Spill  
May 27, 2010**

Thank you Chairman Markey and Ranking Member Upton for holding this important hearing today. I would also like to commend Chairman Markey for holding a properly noticed subcommittee hearing on this important topic, as opposed to another media event that masquerades as a hearing.

The Deepwater Horizon oil spill is getting plenty of well-deserved attention, but I think the government response needs to be scrutinized, too. I am happy to see that we have some of the government officials responsible for managing the oil spill with us today. We need to hear from them what the federal response has been, how it has been coordinated, and what steps the administration is taking to supervise the response efforts. I am glad that Administrator Jackson is with us today because the American people need to know why the EPA and the Coast Guard

approved the use of a dispersant on EPA's National Contingency Plan Product Schedule, and then changed their minds on Wednesday, May 19<sup>th</sup> and required BP to immediately pick a different dispersant from EPA's own product schedule, then changed their minds again and decided the original dispersant was okay if BP just used less of it. This on-off-on, switcheroo school of emergency management is introducing new confusion where there is plenty to go around already. I've also heard stories of how the Administration's presence in the Gulf is beginning to look like traditional federal bureaucracy, where requests for approval of things like additional booms or dredging permits go unanswered for days or even weeks.

It is also important for the witnesses to describe what expertise within the Government the federal agencies are bringing to bear. It is also important to hear our witnesses confirm that the Administration does not seek to shut down offshore energy production for America as a result of this incident.

The accident in the Gulf of Mexico is tragic, but it is an anomaly for an industry that has been safely and successfully exploring offshore for longer than most of us have been alive. American-owned offshore production remains vitally important to our energy security and independence. Of all the sources that can have a measurable impact in enhancing our domestic energy supply, offshore oil has the greatest potential. Currently about 30 percent of the nation's total domestic oil production and 11 percent of domestic natural gas production comes from the Gulf of Mexico. We can't afford to let this spill be made into the Three Mile Island of offshore energy by the people who think the word sustainable means everyone in America should walk to work. In the foreseeable future, America will continue to have a significant requirement for fossil fuels, and as long as there is a concern about reliance on foreign sources of energy, we're going to need offshore production.

The facts aren't in, and it is very early to reach any conclusions at all. Indeed, the principal focus of the EPA right now should be to stop the spread of oil.

**[Potential sentence on top kill operation.]**

Our job today is to ask fair but thorough questions so we can begin to identify what happened and why it happened so we can make energy production safe, not so we can generate excuses to stop it.

Unfortunately, Secretary Salazar is not with us today, so he won't be able to explain personally how his department's Mineral Management Service inspected Deepwater Horizon three times since January and gave it passing grades every time. In his absence, I expect Mr. Haynes to address the issue, and I hope my Democratic colleagues can induce Secretary Salazar to make himself available for that discussion as soon as possible.

Ultimately, we have to know what caused this spill. We have to understand whether there was human error, or a material failure or a technological failure that could have been prevented with

better maintenance, better planning. We need to know how effective the federal government was in reacting to this oil spill, and whether anything more could have been done to contain this spill. We need to understand the decision-making process behind approval of dispersants followed by evolving and conflicting directives relating to those same dispersants.

Until this incident, offshore drilling had a strong safety record that was getting stronger. According to data from the Minerals Management Service, between 1996 and 2008, for combined operations on the U.S. Outer Continental Shelf, lost workday incident rates fell from a 3.39 rate in 1996 to a 0.64 rate in 2008. That is a reduction of more than 80 percent.

Our hearing today is about current and past events, but ultimately, we have to focus on the future: As long as the Gulf of Mexico's energy production represents a third of the daily supply for our country and its people, we will need it. So the long-term concern is this: How do we guarantee that the Outer Continental

Shelf drilling program will continue to operate safely and effectively?

Thank you Mr. Chairman, I will yield back my time and look forward to hearing from the witnesses.

###

Mr. BUTTERFIELD [presiding]. Thank you, Mr. Barton.

At this time, the chair recognizes the chairman emeritus of the committee, Mr. Dingell.

**OPENING STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. DINGELL. Mr. Chairman, thank you; and thank you for holding this important hearing today.

The Oversight and Investigations Subcommittee held a hearing a couple of weeks ago where we heard from BP, Transocean, Halliburton, and Cameron. Today, we have the administration officials. Mr. Chairman, I commend you for having the administration officials here today. Their testimony and their answers to questions are equally critical in terms of finding out what went wrong and why and what to do about it.

To our witnesses, thank you for being here today.

Mr. Chairman, as I have mentioned in previous hearings, I have been a supporter of offshore oil and drilling; and I must say that the oil companies are making this support increasingly difficult. I have tried to support this when it was right and in compliance with our environmental laws and hoped that it was for many years.

I come from Michigan, and we are a manufacturing State, and domestic manufacturers need domestic energy sources. Domestic oil and gas drilling is as much a part of a comprehensive energy policy as anything else and can reduce our dependence on foreign energy sources and increase our manufacturing competitiveness.

On the other side of that, Mr. Chairman, I am an avid conservationist. I wrote many of our cornerstone environmental laws. That includes the National Environmental Policy Act, the Endangered Species Act, and the Marine Mammal Protection Act. These laws are a little like my children. I protected them for years and intend to do so as long as I am able. I have observed that they do not appear to have been properly enforced by the administration, nor do I see that they have been properly carried out by the oil companies.

Balancing these views is challenging. Today, I am forced to come to a difficult conclusion. We need to establish a complete moratorium on all leasing and all drilling activities until it is established that all of it is done and is being done in full compliance with the environmental laws and with full attention to safety and to avoiding the kind of disastrous spills that we are seeing going down in the Gulf. And so full compliance with the environmental laws has to be the responsibility of the oil companies but also of the administration; and I refer very specifically to NEPA, which appears to have been significantly disregarded, and the Marine Mammal Protection Act.

I don't believe that new regulation is necessary at this time. Quite frankly, because we have our current environmental laws in place for a long time, it is my belief that if they had been properly followed we would probably not be in the mess in which we currently now find ourselves.

And the fact is that NEPA and the Marine Mammal Protection Act are good laws that work when properly enforced, but they were

set aside for BP Deepwater Horizon in behavior that is unacceptable by our government.

I am extremely dismayed, disappointed, and just plain angry about the process or lack thereof used by the Minerals Management Service. Drilling at any cost seems to be the modus operandi. Cash bonuses have been handed out for meeting deadlines for offshore leasing. Broad exemptions from environmental laws have been made, including in the case of Deepwater Horizon, and scientists have been ignored.

After everything we have learned over the years about BP, I might expect this kind of behavior from them but not from the Federal Government. I would note we have from time to time seen BP before this committee and its investigative committees to talk about the failure in terms of wells on pipelines, major spills and explosions; and always we were promised that BP would do better. They have not.

I do appreciate and do commend the administration's efforts to reform the way we do oil and gas leasing, but I am not sure that is enough. Very frankly, we need a timeout. We need to be taking stock of what is wrong with the system, what we are not doing right, what we can do better, how we didn't comply with the laws, and how we are going to make sure that our laws are being complied with. The stakes are too high to do otherwise.

I yield back the balance of my time.

Mr. BUTTERFIELD. I thank the gentleman.

The chair recognizes the gentleman from Florida, Mr. Stearns.

**OPENING STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA**

Mr. STEARNS. Mr. Chairman, thank you.

I regret that Mr. Markey, the chairman of the subcommittee, is not here. I would like to answer his opening statement where he said the Bush administration is at fault for this. I think that is, obviously, a stretch.

If you read any of the air pollution act, which I am going to read to you, the Clean Water Act section 311(c)(1)(A), the President shall ensure effective and immediate removal of a discharge and mitigation or prevention of a substantial threat of discharge of oil or a hazardous substance.

So the President is involved here. He is responsible. If there is any problem, it is he and the U.S. Coast Guard who report to him.

Now, Mr. Markey went on to say there was an impressive Federal response. Well, it is not enough. And, in fact, even as we speak here this afternoon, officials in Louisiana are still waiting—still waiting for the Federal Government to provide millions of feet in boom to approve an emergency permit to fully—not partially—implement their plan to dredge and build a new barrier island to prevent even more oil from reaching their marshes and wetlands.

Mr. Chairman, Saudi Arabia had an oil spill in the Gulf. It was many, many times this; and they used their ships and barges to vacuum up the spill. In fact, there are many countries around the world who have volunteered with the State Department, including Canada, France, Germany, and others, the United Kingdom, to help with the idea of providing technical expertise, booms, chemical



dispersants, oil pumps, skimmers, and wildlife treatment; and none of that has been accepted by this administration. The vast majority of assistance has not been utilized.

The blunt fact is, the administration is on the watch. It is their responsibility. Everybody knew that the Minerals Management Service was not effective. There were so many inspectors' reports about this. It should have been reformed, and it should have been done on the President's watch, and certainly he has responsibility for this.

Mr. BUTTERFIELD. Thank you.

At this time, the chair will recognize the gentleman from the State of Washington, Mr. Inslee.

**OPENING STATEMENT OF HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON**

Mr. INSLEE. Thank you.

Well, I am shocked that the Republicans are blaming this disaster on Barack Obama. It is shocking to me that that could happen. And I guess maybe I shouldn't be shocked, but I am.

It is sort of like H. Rap Brown, who I think coined the phrase "burn baby burn." He didn't blame the government for the arson; and those who pushed the "drill baby drill" positions as the solution to our energy woes, it seems to me, ought not to be blaming the government for this particular tragedy.

There are legitimate issues about everyone's performance, and it is appropriate to look at everyone's performance. But it wasn't Barack Obama's decision not to use 20 centralizers on the rig which, in fact, the BP people thought should be used and only used six. So that they didn't have any centralizers. Centralizers are the things that keep the pipe centered in the well board so you don't get voids in the cement. And the BP staff said, well, you should use 20. Well, somebody delivered the wrong ones to them, so they only used six, and they didn't have any in the cement area above the hydrocarbon area. That wasn't Barack Obama's decision.

It wasn't Barack Obama's decision to use a casing system that created higher risks of a blowout in order to save some dollars. That was British Petroleum's decision.

It wasn't Barack Obama's decision to have a dead battery in the blowout provider. It was someone, either BP or one of the other subcontractors, had and didn't tighten up the valve so you had a hydraulic leak.

So I think we are going to find we need to have, yes, greater oversight over this industry. But I will tell you, Lamar McKay, who was just down at our Natural Resources Committee, looked a little sheepish trying to explain why British Petroleum didn't use the centralizers that they thought they should use. And he wasn't blaming it on Barack Obama.

So I think it would be helpful to really focus on what really happened here, and I look forward to the testimony.

And, by the way, just one comment. Administrator Jackson, we are not going to let people take away your authority to prevent all the invisible oil spills that are going on from carbon dioxide making our oceans acidic either. We are going to keep that authority.

Thank you.

Mr. BUTTERFIELD. I thank the gentleman.  
Mr. Shimkus from Illinois.

**OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS**

Mr. SHIMKUS. Now, Mr. Inslee, I was telling Administrator Jackson how nice I was going to be today; and you go rile me up. Because we could go into the climate debate, which I don't want to do. But I do want to talk about the impending issues. So we are pleased to have you all here.

I will direct some questions on the dispersant issue and just getting clarification. A lot of us have been informed now. We are trying to gather information. And I will talk about the type being used, how it is certified, questions made that it is not good and then the need for it. And I will go in that direction.

I think there is some valid concern about, when we have an emergency—responding in an emergency situation, the marshes are being polluted, we do have some delay from the locals who want to protect their marshes by the permitting process. I think we should be able to expedite that.

And I think there will be some emotions on all sides. These locals want to do all they can, and there is some delay on the local elected officials and their ability to do everything they want to do.

But we are all in this together. This is a huge undertaking. No one is happy about it.

I am a “drill baby drill,” and I still believe that is important to our national energy security. Three thousand drilling operations in the Gulf. Katrina went by, no effect. We just can't be Pollyannish about our energy needs. I am one that will also continue to talk about our energy security and national security needs.

Thank you all for coming. I yield back, Mr. Chairman.

Mr. BUTTERFIELD. Thank you Mr. Shimkus.

The chair recognizes the gentleman from Texas, Mr. Green.

**OPENING STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. GREEN. Thank you, Mr. Chairman, for holding the hearing.

The Gulf of Mexico is in the midst of an incident that is a tragedy we have never seen, and my thoughts and prayers go out to the families and communities affected by this terrible incident.

I appreciate the administration being here to answer our questions. I know your colleagues are diligently working to stop that leak.

While I agree that we should look at how effective our government response has been, certainly look at the adequacy of BP's response plans, I believe that our efforts should focus at this time mainly on plugging the well instead of casting blame.

We are certain to continue hearings on this issue for months to come. There is no doubt the eventual lessons learned from Deepwater Horizon spill will impact on how our offshore resources are obtained. The industry should provide an accurate response plan for every rig; and, conversely, MMS should have adequate oversight to ensure that these response plans are adequate.

Having said that, I want to caution my colleagues against rushing through any legislative proposal that adversely affects our ability to develop domestic resources, for example, automatically raising the liability cap to \$10 billion when maybe a BP or a major company could afford that, but so much of the Gulf of Mexico is produced by independents who don't have the capitalization of the majors.

These proposals should be thoroughly vetted by the committees of jurisdiction. Our energy resources are vital to our national security, economic growth of our country; and our country requires a safe and effective and steady development of its offshore oil and gas resources.

I have been on this committee since 1997, and I remember about 3 years ago we were all lamenting \$4 a gallon gas. If we continue the prohibition against deep water or even shallow water production, you can guarantee it that we will be back to \$4 a gallon gas, and we won't be able to blame Saudi Arabia for it.

Thank you for the work you are doing, Mr. Chairman. I yield back my time.

Mr. BUTTERFIELD. Thank you, Mr. Green.

The gentleman from Pennsylvania, Mr. Pitts.

**OPENING STATEMENT OF HON. JOSEPH R. PITTS, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA**

Ms. PITTS. Thank you, Mr. Chairman. Thank you for holding this hearing.

I want to begin my comments today also by expressing my deepest regrets to the family members and friends who have lost their loved ones.

This is a tragic event. Not only have lives been lost but an unknown amount of oil has been leaked into the ocean, causing great damage and horrible effects, some of which we know now and some of which will take years to discover.

In the wake of this event, questions regarding the cause of the explosion and leak have naturally arisen, along with questions on the appropriateness of the response from BP and the administration. Particularly, I am eager to hear from our witnesses today regarding whether or not sufficient response plans were put to work in order before the incident occurred and, if they were, whether or not they are currently working.

It seems to me that the Federal response has been not only disjointed but confusing and frustrating for those on the ground trying to bring relief. A prime example would be the EPA's convoluted instructions regarding the use of dispersants.

In addition, Louisiana Governor Bobby Jindal said on Monday that, quote, we have been frustrated with the disjointed effort to date that has too often meant too little, too late for the oil hitting our coast, end quote. This is incredibly disappointing.

As I have said, this is a tragic event. We need to make sure due diligence is done in investigating the causes and the appropriateness of the response in the aftermath. However, we need to make sure the response of this body and the administration is prudent,

one that still encourages our country's energy security and independence.

I look forward to hearing from our witnesses today.

I yield back.

Mr. BUTTERFIELD. I thank the gentleman.

The gentlelady from California, Mrs. Capps.

**OPENING STATEMENT OF HON. LOIS CAPPS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mrs. CAPPS. Thank you, Mr. Chairman, and welcome to our witnesses. Thank you for your testimonies in advance.

Thirty-eight days after BP's Deepwater Horizon rig exploded and killed 11 workers, 15 to 40 million gallons of toxic crude oil have spilled into the Gulf of Mexico. The oil from the slick now equals the size of South Carolina, has soiled more than 100 miles of Louisiana's coastline. Fishermen working on the cleanup have become ill after working long hours near waters fouled with oil and dispersants, reporting nausea, dizziness, headaches, and chest pains. It has gotten so bad that yesterday the unified command recalled the vessels operating in Breton Sound after crew members reported health problems.

Today I, along with Health Subcommittee Chairman Pallone, wrote to BP, urging the company to take the necessary steps that it apparently is not now doing to ensure the health and safety of the workers and volunteers who are cleaning up this giant mess.

Quite frankly, it is an outrage that this company, which made \$16 billion in profits last year, has such a terrible record on safety for the drilling itself and for the workers who are trying to clean up the mess; and that is why it is so important that the Federal Government is bringing every resource necessary to put a stop to this catastrophe.

Last week, the President established an independent commission which was modeled on legislation I introduced with Chairman Markey to investigate the cause, the response, and the impact of BP's spill. Earlier today, he announced tougher safety requirements for offshore drilling and a stronger inspections regime; and he took steps to ban new deep water wells for 6 months, cancelled exploratory drilling in Alaska, and cancelled a proposed lease sale off of Virginia's coast.

Mr. Chairman, this whole tragedy brings into stark relief what many of us have been saying for years and which the chairman, in his opening remarks, said as well. We need to end our addiction to fossil fuels. My only hope now is that perhaps there is some measure of good that can come out of the sickening sights of toxic sludge in Louisiana's wetlands, the oil slick on the open ocean, the underwater toxic plumes that continue to kill marine life, wildlife, and birds at an alarming clip. Finally freeing ourselves from this costly addiction would be a fitting tribute to the terrible tragedy being borne by the people of Louisiana and the Gulf.

I yield back my time.

Mr. BUTTERFIELD. Thank you, Mrs. Capps.

The chair recognizes the gentlelady from California, Mrs. Bono Mack.

**OPENING STATEMENT OF HON. MARY BONO MACK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mrs. BONO MACK. Mr. Chairman, I would like to begin by also sending my condolences to the families of the 11 brave men who lost their lives as a result of this tragic accident.

I also appreciate very much the time of our witnesses to be here with us today to discuss the issues related to the massive spill off of Louisiana's coast.

I know that today's hearing will delve into the details of who knew what and when they knew it, which we must examine, yet we seem to be spending so much time pointing fingers and playing politics, which is exactly what has the American people frustrated beyond belief.

What we have in front of us is a disaster that has extreme environmental and economic effects. Millions of Gulf Coast residents wake up every morning knowing that they are providing the food on our plates and the gasoline to power our vehicles. Yet I am extremely frustrated to see both BP and politicians, plus, truthfully, this entire town, continue to point fingers and play a game of gotcha instead of collaboratively and aggressively seeking solutions and taking action.

We cannot afford more bureaucratic barriers to addressing the need to cap the well as well as lessen the spill's effects. The excuses have been many, and the press excuses even more numerous. But today we need to get clear answers about the levels of preparation for the deep water drilling taking place in this region and the clear path forward for cleanup operations of this epic disaster. The fact is, wasting time, playing politics, and placing blame on past actions when confronted with this national emergency is, frankly, insulting to the hardworking people of the Gulf region.

With that, Mr. Chairman, again, I thank our witnesses; and I yield back the balance of my time. I look forward to the testimony out of our panel. Thank you.

Mr. BUTTERFIELD. I thank the gentlelady.

We will now recognize another gentlelady from California, the third in a row, Ms. Harman.

Ms. HARMAN. Thank you, Mr. Chairman. We plan to take this committee over very soon.

Mr. BUTTERFIELD. Please don't ask unanimous consent for that.

**OPENING STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. HARMAN. No, I was just stating our intention.

As Chairman Markey said in his opening remarks, quote, this is BP's spill, but it is America's ocean.

That ocean touches my district, which hugs almost 20 miles of California coastline. I have always opposed drilling off the coast of California and have cast 20 votes—more than 20 votes against offshore drilling over my eight terms in Congress, including a vote against the 2006 Deep Ocean Energy Resources Act.

Further, I am an original cosponsor of the Garamendi bill that seeks to ban all drilling off the entire west coast.

The events of the last month have only reinforced my opposition. Like millions of Americans, I have watched the days mount and the strategies fail. The crude oil gushing from BP's blown well is now threatening Florida's Atlantic coast and when it gets into the Gulf stream could potentially spread thousands of miles.

There is a Washington lesson and a national lesson here. For the Washington lesson, we have to dramatically ramp up government oversight of drilling activities and end the sweetheart relationship between MMS and industry. President Obama was right to force the resignation earlier today of the MMS director, who obviously is not before us now. And he and Secretary Salazar and everyone on today's panel all must do more, as we must.

The national lesson is that America's insatiable thirst for oil must be stemmed. It is dirty, poses major environmental risks, and when we buy it from abroad, it enriches our enemies. We must seize this moment to end our crippling dependence on oil. Enough is more than enough.

I yield back.

Mr. BUTTERFIELD. Thank you.

I believe Dr. Burgess is next.

**OPENING STATEMENT OF HON. MICHAEL C. BURGESS, A  
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. BURGESS. Thank you, Mr. Chairman.

We have heard a number of things today. We are going to hear a number of things from our witnesses, and I am anxious to do so.

Again, I will just reiterate some of the questions that came up in earlier hearings that we have had. Particularly I am glad we do have a representative from the Minerals Management Service.

The application that was submitted for the Deepwater Horizon drilling permit in March of 2009 raises some serious issues.

A section 2.7 blowout scenario, a scenario for a potential blowout of the well from which BP would expect to have the highest volume of liquid hydrocarbons, is not required for the operations proposed in this exploration plan.

Section 2.3, BP Exploration Production, Inc. does not propose to utilize new techniques or unusual technologies for these operations or drilling in 5,000 feet of water, going down 18,000 feet. That does sound new and unusual to me.

Section 14.2, in the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on industry-wide standards for using proven equipment and technology for such responses.

Implementation of BP's regional oil spill response plan, which address available equipment and personnel techniques and recovery and removal of the oil spill.

Why was this application—I mean, shame on BP, shame on BP for submitting an application that was so scant on details. But why was an application like this ever accepted in the first place?

And we have heard other people in their opening statements make comments about folks around the country that are concerned about this and want to help. I did two town halls on Saturday, town halls in north Texas. A fellow brought in this contraption and showed it to me. That is basically a coke bottle that has been cut

in half. He has got this thing filled with what looked like sawdust, but it was some sort of polypropylene material that he has. And, apparently, it has another Federal use, so it is something that has already been approved by the EPA.

He poured a bottle of gunk like Ed Markey had in here the other day, poured the bottle of gunk in the top, and you could see down in the bottom of the mayonnaise jar—his equipment was not very sophisticated—it looks like clear water is coming out.

This individual had been trying to get some recognition of his technique. There are people like this all over the country that are willing to help. They want to help clean up their coastline. Governor Jindal wants to help the coastline, and he has been prevented by the Corps of Engineers and the Environmental Protection Agency. It is time to relax those standards and give him the authority that he needs to do what needs to be done.

I will yield back.

Mr. BUTTERFIELD. I thank the gentleman.

At this time, the chair recognizes the gentlelady from Wisconsin, Ms. Baldwin.

**OPENING STATEMENT OF HON. TAMMY BALDWIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN**

Ms. BALDWIN. Thank you, Mr. Chairman.

I just came from a hearing at the Judiciary Committee on the BP oil spill and liability issues where we heard from Keith Jones, the father of one of the men who lost his life. We also heard from two survivors from the explosion. And I daresay there wasn't a dry eye in the audience as the three of them testified.

Like so many of my colleagues and my fellow Wisconsinites and all Americans, I am really angry about the oil spill in the Gulf of Mexico and sad and angry about the loss of life. I am horrified by the negligence and the conflicts of interest that have been revealed and exhibited leading up to this tragedy, and I am furious that for over a month oil has been spewing into the Gulf of Mexico, endangering lives and livelihoods and our precious ecosystem with no end in sight.

There are several aspects of this crisis that are particularly troublesome: the conflicts of interests at the Minerals Management Service, which allowed the agency to oversee the safety of offshore drilling while simultaneously collecting royalties from the companies they were overseeing, and this is unacceptable. We have heard the reports of staff members of the agency repeatedly accepting tickets to events and lunches and other gifts from industry.

Equally disturbing is that BP has used unprecedented volumes of chemical dispersants to break up the oil offshore that we now learn could further imperil the mammals and fish and birds and turtles that inhabit the Gulf region. And despite EPA belatedly telling BP to limit use of this product, the company has continued to do so.

The situation in the Gulf appears to be one of a company continuously believing that it is above the law, ignoring warning signs, shortcutting proper procedure, failing to properly plan for a disaster, and putting profits over other considerations.

Mr. Chairman, this spill is a tragic reminder that we must rethink our Nation's energy policy and move toward a post-petroleum economy.

I thank our witnesses, and I yield back the balance of my time.

Mr. BUTTERFIELD. I thank the gentlelady.

The gentleman from Louisiana, Mr. Scalise.

Mr. SCALISE. Thank you, Mr. Chairman.

I would like to ask unanimous consent to submit this into the record. It is a statement from the U.S. Travel Association about combating the BP oil spill.

Mr. BUTTERFIELD. Without objection.

[The information was unavailable at the time of printing.]

**OPENING STATEMENT OF HON. STEVE SCALISE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA**

Mr. SCALISE. Thank you.

Yesterday, we paid respects to the 11 men who lost their lives in the explosion of the rig, and our prayers go out to them and their families. And I know some of the families are here today. I hope to have the opportunity to meet with them.

I hope the top kill is successful today, and we may not know that for a few days, but we can't forget that more than a month's worth of oil has already spilled into the Gulf and is moving its way into our marshes, and that is something we are going to have to be working for a long time to clean up that mess.

But today the President held a press conference where he said that he has been in charge from day one, and I have just got to disagree. If this has been his top priority, if he has been in charge from day one, then why is it that it took more than 16 days to get an answer from our Governor and our local officials who submitted a plan to protect the marsh from the oil?

They submitted this plan more than 2 weeks ago before any oil was in the marsh. It sat on bureaucratic desks, didn't go anywhere. If all hands were on deck, the President would have rolled up his sleeves day one when the Governor submitted that plan and say, we are going to figure out a way to get this done and to give you the Federal permit, so y'all can go and protect your marsh.

It didn't happen. It didn't happen for over 2 weeks, and now we are hearing from the Governor's office that the plan that might have been approved today only covers about 2 percent of the Governor's plan. That is just not acceptable. We are trying to protect our marsh right now; and if the President has got a better plan, put it on the table. But we haven't seen them come up with any plan to protect our marsh. We have put one on the table for over 2 weeks, and nothing from the President. That is inexcusable.

If all hands were on deck, then why is it that on Sunday—on Sunday as oil was coming into our marsh in Grand Isle I heard reports from officials who said the boom-laying boats were sitting at the dock. They weren't putting out boom. They were sitting at the dock instead of putting out the boom as oil is coming into our marsh.



That is not all hands on deck. That is not a top priority of the President. If he is in charge, as the law says that he should be under the Oil Pollution Act, that should have never happened.

So I am glad that today he acknowledged that some mistakes were made, but we don't have time for the mistakes and the excuses. We need action. And when he comes down tomorrow—and I know he won't share with our delegation where he is going or what he is doing, but I hope he meets with those local officials, and I hope he finally solves these problems instead of all of the red tape and all of the excuses that we are getting.

Thank you, and I yield back.

Mr. BUTTERFIELD. Thank you, Mr. Scalise.

Before proceeding, it has come to my attention that one of our scheduled witnesses, Ms. Jo-Ellen Darcy, is going to have to leave at 1500, 3:00 this afternoon. So we are going to allow you to be excused in just a moment. But thank you very much for your willingness to come.

I am told that your deputy, Mr. Terrence "Rock" Salt, will be available to answer any questions. But we thank you for your service. We thank you for your willingness to come today.

I will say for the record that Ms. Darcy is the Assistant Secretary of the Army for Civil Works, a position that supervises the Army Corps of Engineers' Civil Works Program. The Army Corps of Engineers is an environmental preservation and restoration agency that regulates activities in the Nation's wetlands. That is a very honorable position, and we thank you for all that you do.

All right. Without objection, we might go ahead and recognize you for your 5 minutes. I am told that that may be in order. Let me consult with the ranking member just a moment.

Mr. UPTON. I just wanted to ask, too, for all members, we ask unanimous consent that their opening statements might be put into the record at this point, too.

Mr. BUTTERFIELD. Without objection.

Do you consent to the witnesses' testimony being given at this time?

The witness is recognized for 5 minutes.

**STATEMENT OF THE HONORABLE JO-ELLEN DARCY, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), ACCOMPANIED BY TERRENCE "ROCK" SALT, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE ARMY**

Ms. DARCY. Thank you Congressman Butterfield, and I want to thank all members of the subcommittee for inviting me here today.

My name is Jo-Ellen Darcy. I am the Assistant Secretary of the Army for Civil Works; and I am joined by "Rock" Salt who is my Principal Deputy, who will come up here when I finish delivering this testimony.

And I ask that my written statement be submitted for the record in full, because I will summarize here for you.

In the midst of the response to the tragic Deepwater Horizon oil spill, the Corps of Engineers continues to provide reliable navigation on the river systems and waterways along the Gulf Coast as it maintains vigilant monitoring and assessment of the oil impacts.

In addition, the Corps has provided modeling support for river discharges and is offering emergency review under section 404 and section 10 authorities of a proposed barrier plan developed at the local level intended to prevent the oil from reaching the coastal wetlands.

The Corps has also reviewed and provided input to an interim EPA region six oil solidifier policy and supports its implementation.

Currently, the oil spill is not affecting dredging operations or navigation in any rivers or waterways along the Gulf. There have been no incidents of deep draft vessels getting oil on their hulls as they approach the southwest pass on the Mississippi River.

The U.S. Coast Guard, working with navigation interests, has established cleaning stations in the lower Mississippi River to clean those vessels before they proceed up the river to the New Orleans district as well as similarly this was done after the 2009 Mississippi River oil spill.

The Corps continues daily monitoring of any impacts to navigation and dredging operations as a result of the oil spill and maintains continued coordination with navigation interests and appropriate agencies.

The Corps has analyzed a number of water management conditions and possible actions to determine whether we could modify river flows to keep oil away from the mouth of the Mississippi River and wetlands on either side of the river. This analysis included possible deviations from the statutory 70/30 split at the Old River Control Structure between the Mississippi River and the Atchafalaya Basin. Numerical modeling analysis has shown that diverting water from the Atchafalaya Basin to the Mississippi River at the Old River Control Structure would have minimal influence on the movement of the oil in the Mississippi River Delta.

Due to the extreme flooding on the Tennessee and the Cumberland Basins earlier this month, Mississippi River discharges below New Orleans will nearly double. Even with these forecasted increases in discharge, we do not anticipate increased flows that would allow opening the Bonnet Carre Spillway to reduce the oil from entering the Mississippi Sound area.

With respect to the smaller freshwater diversion structures, those are currently operating near design capacity, and the modeling again suggests that this may help slow the movement of the oil into the project marshes from the marsh and the open water boundaries in the immediate vicinity of these structures. Our team continues to evaluate other water management scenarios to determine if they will help address the oil spill issues.

The Corps' Engineering Research and Development Center is also working with the United States Geological Survey program to collect and analyze baseline sediment samples in the wetlands and the navigation areas. These pre-oil spill samples will provide critical comparisons to post-emergency sediments that will be required for efforts to continue with Louisiana coastal restoration through the beneficial uses of dredged material.

I would like to update my written testimony based on actions taken today.

The Corps of Engineers has proffered a permit to the State of Louisiana which grants partial approval for Louisiana's barrier is-

land project proposal, covering the State's original request and includes six different areas. Once this permit is finalized, the State would be authorized to construct the barrier islands as long as this construction meets the terms and the conditions established in the Corps permit. The conditions in the permit respond to all issues and concerns raised by the other Federal agencies.

Additionally, the Corps has issued a total of 12 permits using our emergency authorities throughout the Gulf. There are seven additional permits that are still pending.

Seven people have been deployed from our research lab to support the Fish and Wildlife Service natural resource damage assessment activities. Activities include but are not limited to providing expert NRDA strategy development, development of bird injury study plans, global positioning systems collection and integration of field data, primary GIS and mapping support.

Our research lab stands ready to assist in the development of a common operating plan for the multi-agency oil spill response. As the Department of Army lead for environmental restoration research and development, our research lab is prepared to assist in formulating and implementing strategies for long-term monitoring and remediation of wetlands and barrier islands areas affected by the oil spill. Our research lab is also prepared to provide analysis for the eventual remediation of contaminated barrier sediment and material removal and ecological restoration.

That concludes my testimony, Mr. Chairman; and, again, thank you for having us. I apologize for having to leave, but Mr. Salt will be here.

[The prepared statement of Ms. Darcy follows:]

**DEPARTMENT OF THE ARMY**

**COMPLETE STATEMENT**

**OF**

**THE HONORABLE JO-ELLEN DARCY  
ASSISTANT SECRETARY OF THE ARMY  
(CIVIL WORKS)**

**BEFORE THE**

**ENERGY AND COMMERCE COMMITTEE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT**

**UNITED STATES HOUSE OF REPRESENTATIVES**

**ON**

**“COMBATING THE BP OIL SPILL”**

**May 27, 2010**

### **Introduction**

Mr. Chairman and Members of the Subcommittee, I am Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works). Thank you for the opportunity to be here today to discuss the U.S. Army's ongoing efforts to support the oil spill response in Coastal Louisiana and assessment of impacts to navigation and the ecosystem. In the midst of the response to the tragic Deepwater Horizon oil spill, the Corps of Engineers (Corps) continues to provide reliable navigation on the river systems and waterways along the Gulf coast as it maintains vigilant monitoring and assessment of the oil impacts. In addition, the Corps has provided modeling support for river discharges and is offering emergency review under Section 404 and Section 10 authorities of a proposed barrier plan, developed at the local level, intended to prevent the oil from reaching the coastal wetlands. The Corps has also reviewed and provided input to an interim Environmental Protection Agency (EPA) Region 6 Oil Solidifier Policy and supports its implementation.

### **Navigation Assessment**

Currently, the oil spill is not affecting dredging operations or navigation in any rivers or waterways along the Gulf. So far there have been no incidences of deep-draft vessels getting oil on their hulls as they approach the southwest pass on the Mississippi River. The U.S. Coast Guard, working with navigation interests, has established cleaning stations in the Lower Mississippi River to clean those vessels before they proceed up the River to New Orleans, similar to what was done in the 2009 Mississippi River oil spill. The Corps continues daily monitoring of any impacts to navigation and dredging operations as a result of the oil spill and maintains continued coordination with navigation interests and appropriate agencies.

### **Modification of Mississippi River Flows**

The Corps New Orleans District, Mississippi Valley Division, and the Engineer Research and Development Center Coastal and Hydraulics Laboratory have analyzed a number of water management conditions and possible actions to determine whether we could modify river flows to keep oil away from the mouth of the Mississippi River and wetlands on either side of the River. This analysis included possible deviations from the statutory 70/30 split at the Old River Control Structure between the Mississippi River and the Atchafalaya Basin. Numerical modeling analysis has shown that diverting water from the Atchafalaya Basin to the Mississippi River at the Old River Control structure would have minimal influence on the movement of the oil in the Mississippi River Delta region. Due to the extreme flooding of the Tennessee and Cumberland basins early this month, Mississippi River discharges below New Orleans will nearly double. However, even with these forecasted increases in discharge we do not anticipate increased flows that would allow opening the Bonnet Carré spillway to reduce oil entering the Mississippi Sound area. With respect to the smaller freshwater diversion structures, those structures are currently operating near design capacity and the modeling suggests that this may help slow the movement of oil into the project marshes from the marsh/open water boundaries in the immediate vicinity of the structures. This team continues to evaluate

other water management scenarios to determine if they will help address the oil spill issues.

#### **Participation in baseline sediment sampling**

The Corps Engineering Research and Development Center is also working with the United States Geological Survey program to collect and analyze baseline sediment samples in the wetlands and navigation areas. These pre-oil spill samples will provide critical comparisons to post-emergency sediments that will be required for efforts to continue with Louisiana coastal restoration through the beneficial uses of dredged material.

#### **Review of Permit from Louisiana to create a barrier to Intercept Oil**

On May 11, 2010, the Corps received a permit request from the State of Louisiana for the construction of an approximately 100 mile long barrier intended to intercept the oil before it enters the marshes. On May 12, 2010, the Corps met with the federal and state agencies to review the permit and solicit federal and state agency comments. On May 14, 2010, the Corps forwarded agency comments to the State of Louisiana. Subsequently, the State of Louisiana modified their plan and submitted a permit modification on May 14, 2010. The major change to their application was to remove borrow sites within a mile of the Chandeleur islands and shift to borrow sites further into the Gulf. The Corps is refining the Environmental Assessment based on the engineering analysis. The Corps is reviewing the permit request under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. As this request was rendered in the context of the Oil spill, the Corps is working with the National Incident Commander to evaluate the request.

#### **Engineer Research and Development Center (ERDC) Support**

In addition to ERDC Coastal and Hydraulics Laboratory support, seven people have deployed from the ERDC Environmental Laboratory to support U.S. Fish and Wildlife Service's Natural Resource Damage Assessment (NRDA) activities. Activities include, but are not limited to, providing expert NRDA strategy development, development of bird injury study plans, global positioning systems collection and integration of field data, primary GIS and mapping support.

ERDC stands ready to assist in the development of a common operating plan for the multi-agency oil spill response. As the Department of Army lead for environmental restoration research and development, ERDC is prepared to assist in formulating and implementing strategies for long-term monitoring and remediation of wetland and barrier island areas affected by the oil spill. ERDC is also prepared to provide analysis for the eventual remediation of contaminated barrier sediment and material, removal and ecological restoration.

**Conclusion**

This concludes my testimony, Mr. Chairman. Again, thank you for allowing me to testify on the ongoing efforts of the Army in response to the oil spill. I will be happy to answer any questions you or the other Members of the Subcommittee may have.

Mr. MARKEY [presiding]. We very much appreciate your ability to be here, and we also appreciate the responsibilities which you are discharging simultaneously in the Gulf. So we thank you for being here. And when your assistant sits at that table, then we will I think still be able to get the expert advice from your agency. Thank you.

The chair recognizes the gentleman from Georgia, Mr. Barrow, for an opening statement.

Mr. BARROW. I thank the chair.

I am more interested in hearing from the witnesses than I am from hearing from me, so I will waive an opening.

Mr. MARKEY. The gentleman from Louisiana, Mr. Melancon.

**OPENING STATEMENT OF HON. CHARLIE MELANCON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA**

Mr. MELANCON. Thank you, Mr. Chairman. I appreciate you having the hearing today. I thank the witnesses for attending.

First, I would like to say to those that want a political posture, having been through Katrina, Rita, Gustav, Ike, and now the oil spill, I am sick of it. I would appreciate it if y'all would respect the people and the people of the State of Louisiana, the people that died in this accident.

It has not been fun for 5 years in south Louisiana. The press reported today that even using the most conservative estimates that the new flow rate estimates on the leak have grown to nearly 19 million gallons over the past 5 weeks, surpassing the size of the 1989 Exxon Valdez disaster in Alaska.

Having flown over this disaster this past week, I can tell you personally that the scale and the scope of this disaster is greater than one can ever imagine. My constituents in St. Bernard, Plaquemines, Jefferson, Terrebonne, and Lafourche and those that have not yet been impacted are watching this slow-motion tragedy unfold in front of them; and, as of today, there is still no absolute assurance that this leak will be brought under control in the near future.

I am heartened to hear initial reports that the top kill effort appears to temporarily have stopped the flow of oil and gas into the Gulf, and I hope and pray that these efforts as they continue lead to a permanent solution.

The response to this leak has consumed a tremendous number of resources and much manpower since the rig first sank weeks ago. I have been in constant contact with the administration and first responders on the ground. I have also reached out to local officials in my district to take inventory of their response needs, booms, vessels, whatever, and work towards providing these resources as best I can.

And while I know this hearing today is to discuss the current response to the leak, I would like to remind my colleagues and the distinguished panel of witnesses today that the recovery phase is just as critical as the response phase. Our culture is threatened, our coastal economy is threatened, and everything that I know and love is at risk. Even though this marsh lies along coastal Louisiana, these are America's wetlands.



I just wish to submit the rest of my statement for the record. Thank you.

Mr. MARKEY. We thank the gentleman.

Every member of our committee and every American is praying for the people of Louisiana and the people of the Gulf. It is just an unimaginable tragedy.

The chair recognizes the gentleman from Alabama, Mr. Griffith.

Mr. GRIFFITH. Thank you, Mr. Chairman; and I appreciate Congressman Melancon's feelings and deep emotion.

I grew up in south Louisiana, on Big and Little Alabama, Atchafalaya Basin, the wetlands and spent a lot of my youth in the canals down there. And I can tell you that it is heartbreaking, heartbreaking to lose the lives of the young men from that area whose culture was working on the rigs. And if there is blame to go around, I think it will be many, many people who will accept responsibility ultimately.

I would like to thank the chairman and ranking member for calling this important hearing today and the witnesses for taking the time to come.

I was upset, however, to hear the announcement this morning that the administration has chosen to cancel the western Gulf and Virginia lease sales.

The American Petroleum Institute estimates that from the time a lease is sold, it is 3.5 years before drilling begins; and if successful, it is 6 years before any production takes place.

As we learn from these tragedies, these cancellations do not reflect the stated President's view that we must have oil and gas production in our energy portfolio that we can produce safely. Canceling these leases does not protect us, and it actually is non-discriminating in that we are punishing companies that have an exemplary safety record. We must remember, too, that the Deep Horizon oil—Deepwater Horizon rig had drilled over 70 successful wells.

As we learn the outcome of the many investigations that are taking place, it is vital that we learn lessons from this incident so that we can keep our workers and environment safe to produce our valuable oil and gas.

We must also question the effectiveness of the response on the Federal side as the reports come out stating that this may be the Nation's biggest oil spill. Has the bureaucracy been unable to facilitate a quick response? Reports from the ground say it is not clear who is in charge, which leads to chaos. As we see changes in drilling plans and officials suddenly resigning, it seems that there are unknown facts surrounding the oversight of this project both before and after the explosion.

And thank you both, and all, for coming. Thank you.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the gentleman from North Carolina, Mr. Butterfield.

Mr. BUTTERFIELD. Thank you very much, Mr. Chairman, for convening this very important hearing.

I thank the witnesses for their testimony today.

I think I am sort of like Mr. Barrow, Mr. Chairman, I am eagerly looking forward to the testimony of the witnesses.

One thing for sure, there is so much we don't know about this tragedy. And what complicates the tragedy is that we are not getting much help from BP or Halliburton or from Transocean. And perhaps the witnesses' testimony today will be enlightening on this very important subject.

In time, though, we will find out what happened, or the courts will find the facts and will report them to the American people. It is absolutely clear that more should have been done to prevent this disaster.

Over the past 30 years, the oil industry has used some of the most advanced technologies to drill in increasingly deeper waters. The rapid ingenuity that allows us to drill miles under the ocean floor may have outpaced the commitment to safety. We really don't know the extent of this still. I am looking forward to discovering the true facts of this matter and to report them to the American people.

And so the President is right. I happen to agree with the President. He made a very wise decision today, and I support the President entirely.

Thank you, witnesses, for your testimony. I yield back.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the gentleman from Oklahoma, Mr. Sullivan.

Mr. SULLIVAN. Thank you, Chairman Markey.

Thank you for holding this hearing today on combating the BP oil spill and examining the Federal response to the disaster.

I am interested in learning from our witnesses their thoughts on what went wrong and their ideas moving forward to prevent this from ever happening again.

I am disappointed that no one from the Mineral Management Services is here to testify on their role in response to this effort. Given their integral role of the Federal oversight in offshore drilling operations, it is critically important to hear the MMS's point of view directly and to get their take on what safety lapses occurred and if any regulatory breakdowns happened that may have contributed to this terrible accident.

We still have work to do to uncover exactly what went wrong. There are many questions that will be asked today on ongoing efforts to contain the leak, whether the Federal response plans were in place prior to the incident and whether those response plans had been inadequate in light of the ecological disaster.

I commend the brave men and women who are working day and night to stop the leak and to protect the shoreline in the Gulf region. This is a challenge of epic proportions, and it is the job of this committee to conduct a fact-based investigation into the disaster to find out what went wrong and how we can prevent it from ever happening again. I look forward to getting to the bottom of this tragedy and finding solutions to it.

I yield back the balance of my time.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the gentleman from California, Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

This disaster and tragedy has been a sobering lesson. Technology exists to bring great benefit but also, if not properly overseen, can cause great damage.

Our responsibility now in this body is to provide all the resources at our disposal to stop the leakage and to help the people that are impacted.

But next, we need to expose the facts about the causes of the leak and implement whatever is necessary to prevent this from happening again.

I intend to pursue those responsibilities with vigor. But beyond that, this morning, along with Chairman Markey, Anna Eshoo, Judy Biggert, and myself, we introduced the Electric Drive Vehicle Deployment Act of 2010. We need to move aggressively to make our vehicles more efficient so we can reduce this country's overwhelming demand for oil. I invite all my colleagues to support this initiative. I thank the panel for your participation in this effort.

I yield back.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the gentleman from Missouri, Mr. Blunt.

Mr. BLUNT. Mr. Chairman, I have no opening statement.

Mr. MARKEY. The chair does not see any other members who are looking for recognition at this time.

**STATEMENTS OF THE HONORABLE LISA P. JACKSON, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY; THE HONORABLE LARRY ROBINSON, ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE, NOAA; THE HONORABLE DAVID J. HAYES, DEPUTY SECRETARY, DEPARTMENT OF THE INTERIOR; AND REAR ADMIRAL JAMES WATSON, DEPUTY, UNIFIED AREA COMMAND, UNITED STATES COAST GUARD**

Mr. MARKEY. So we will turn to our first witness, who is Lisa Jackson, the administrator of the Environmental Protection Agency.

Before becoming the EPA administrator, she served as the commissioner of the State Department of Environmental Protection in New Jersey. She is a former New Orleans resident who graduated summa cum laude from Tulane University and earned a masters degree in chemical engineering from Princeton University.

We welcome you, Administrator Jackson. Whenever you are ready, please begin.

**STATEMENT OF THE HONORABLE LISA P. JACKSON**

Ms. JACKSON. Chairman Markey, Ranking Member Upton, Chairman Emeritus Dingell, and members of the committee, thank you for inviting me to testify about EPA's role in responding to the BP Deepwater Horizon rig explosion. First, let me join you all in expressing my condolences to the families of those who have lost their lives in the explosion. We owe them our very best.

As we all know, efforts to stop the oil release continue. While the environmental disaster that the Gulf of Mexico is facing right now certainly has no easy answers, EPA is committed to doing its job: Protecting communities, the natural environment, and human

health from the spill itself, as well as any concerns resulting from the response to the spill.

Since the crisis began, EPA has had nearly 200 staff working on the emergency response, from scientists, engineers, contractors, and others, in Alabama, Florida, Louisiana and Mississippi. We are performing rigorous testing and monitoring of air and water quality, and we are sharing that data with the public every day. I have personally traveled to the region, the region I grew up in and still consider my home, several times over the past week.

For nearly a month, EPA has been monitoring the air and water for pollutants which could pose a health risk to communities. This monitoring is essential to ensure that communities are protected as we respond to the BP spill. All of this information is being made public at [EPA.gov/BPspill](http://EPA.gov/BPspill), as quickly as we can compile it.

One of our top priorities is the safe application of chemical dispersants. Oil spill dispersants are chemicals applied to the spilled oil to break down the oil into small drops below the surface. Ideally, the dispersed oil mixes into the water column and is rapidly diluted and degraded by bacteria and other microscopic organisms.

We know that dispersants are generally less toxic than oil. They decrease the risk to the shoreline and to organisms at the surface, and they biodegrade over weeks, not years, as oil would. But in the use of dispersants, we are faced with environmental tradeoffs. The long-term effects on aquatic life are still unknown, and we must make sure that the dispersants that are used are as nontoxic as possible. To date, BP has used 850,000 gallons of dispersant, a volume never used before in this country.

Since this crisis began, EPA has not only demanded, but has ordered, with the full force of law, that dispersants must be limited in use, in volume, and toxicity.

EPA was first asked by BP on April 30 to authorize unlimited use of dispersants in a novel manner, underwater, at the source of the leak. The goal of their approach was to break up and degrade the oil before it reached the water's surface and came closer to our shorelines, our estuaries, and our nurseries. EPA demanded scientific data from the company to prove that such use of the dispersants was indeed effective. After that data showed that this approach was effective, EPA required the implementation of a rigorous monitoring system to ensure that underwater application would continue to be effective and would also track measurable environmental impacts, if any.

Two weeks later, on May 14th, after the system was in place, EPA conditionally granted authorization for use after it was made clear to the company and to the public that EPA reserved to use the right to halt the use of subsurface dispersant if we concluded that at any time the impact to the environment outweighed the benefit of disbursing the oil. EPA will also continue to push BP to switch to less toxic alternatives due to the volumes of dispersant being used and the lengthening period of this crisis.

Mr. Chairman, we are not satisfied that BP has done an extensive enough analysis of other dispersant options, and it appears that BP seems more interested in defending their initial decisions than analyzing possible better options. That is why, on May 21,

EPA, along with the Coast Guard, ordered BP to evaluate alternative dispersants. We continue to hold BP to this requirement, and I have further committed EPA's best scientists to independently evaluate alternative dispersants as well as verifying BP's science.

And this week, on May 26, along with the Coast Guard, we have instructed BP to significantly scale back the subsurface use of dispersants to only what is needed to be effective. And we have ordered BP to halt use of surface dispersants unless they get prior approval from the Federal on-scene coordinator.

That order has yielded results: Four days ago, the total use of dispersants on a daily basis was 70,000 gallons; yesterday, it was less than 12,000 gallons.

Mr. Chairman, we are in a position with no perfect solution. As we emerge from this response, I commit to revisiting the regulations surrounding EPA's response, particularly regarding dispersant registration under the National Contingency Plan. I also commit to sharing the results with this committee and working with you to tighten the underlying laws, as necessary. As a New Orleans native, I know firsthand the importance of the natural environment to the economy, the health, and the culture of the Gulf Coast.

As I mentioned, this month since the accident, I have been to the region three times. I have listened to people in numerous town halls from Venice, Louisiana, to Waveland, Mississippi, and other communities in between. I have learned in those meetings that the people of the Gulf Coast are eager to be part of this response. They want to be informed and, where possible, empowered to improve their own situation on their own.

We have a great deal of rebuilding to do both in material terms and in terms of restoring this community's trust that government can and will protect them in a time of need. This is one of those times. I urge that we do everything within our power to ensure a strong recovery and future for the Gulf Coast. And, of course, I welcome any questions you may have.

[The prepared statement of Ms. Jackson follows:]

**TESTIMONY OF  
LISA P. JACKSON  
ADMINISTRATOR**

**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**BEFORE THE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT  
COMMITTEE ON ENERGY AND COMMERCE  
UNITED STATES HOUSE OF REPRESENTATIVES**

**May 27, 2010**

Chairman Markey, Ranking Member Upton, and members of the Subcommittee, thank you for the opportunity to testify today about oil spill prevention and response measures and natural resource impacts. The U.S. Environmental Protection Agency (EPA), in coordination with our federal, state, and local partners, is committed to protecting Gulf Coast communities from the adverse environmental effects of the Deepwater Horizon oil spill. My testimony today will provide you with an overview of EPA's role and activities in the affected Gulf Coast region following the April 20, 2010 Deepwater Horizon mobile offshore drilling unit explosion and resulting oil spill as well as a summary of our primary environmental concerns. I also want to express my condolences to the families of those who lost their lives and those injured in the explosion and sinking of the Deepwater Horizon.

**BACKGROUND**

Administration efforts have focused on responding to the disaster and ensuring that the responsible parties stop the discharge, remove the oil, and pay for all costs and damages. EPA is a key part of those efforts. EPA's Oil Spill Program focuses on activities to prevent, prepare for and respond to oil spills from a wide variety of facilities that handle, store, or use various types

of oil. EPA regulates approximately 620,000 of these facilities, including oil production, bulk oil storage, and oil refinery facilities that store or use oil in above-ground and certain below-ground storage tanks. Additionally, EPA is the principal federal response agency for oil spills in the inland zone, including inland waters. Such inland zone oil spills may come from, oil pipeline ruptures, tank spills, and other sources.

EPA shares the responsibility of responding to oil spills with the U.S. Coast Guard (USCG). Further, we share the responsibility for prevention and preparedness with USCG and several other federal agencies. The USCG leads the response to spills that occur along the coast of the United States, or in the coastal zone, and EPA leads the response to spills that occur in the internal United States, or the inland zones. The exact lines between the inland and coastal zones are determined by Regional Response Teams (RRTs) and established by Memoranda of Agreement (MOAs) between regional EPA and USCG offices. EPA and USCG have a strong relationship and work closely on oil spill response activities regardless of where the spill occurs.

#### **EPA'S OIL SPILL RESPONSE PROGRAM**

Each year, billions of gallons of petroleum and other oils are transported and stored throughout the country, creating a significant potential for oil spills and serious threats to human health and the environment. Approximately 20,000 oil spills are reported each year to the federal government. While the severity of these spill reports varies widely, EPA evaluates as many as 13,000 spills to determine if its assistance is required. Usually, EPA either manages the oil spill response or oversees the response efforts of private parties at approximately 300 spills per year. After an oil spill occurs, EPA frequently provides technical assistance which may include air and water monitoring support, mobilizing our On-Scene Coordinators (OSCs) and

EPA's Special Teams including the Environmental Response Team and the National Decontamination Team to assist with the response. The Special Teams are comprised of highly-skilled environmental experts and utilize modern, sophisticated, and innovative technologies for oil spill response.

As the manager of the Oil Spill Liability Trust Fund (OSLTF), USCG reimburses EPA for response from the OSLTF under Pollution Removal Funding Authorizations. To date, EPA has received a total of \$7.2 million in reimbursable funding authority from the USCG for the support and technical assistance being provided by EPA's Regions 4 and 6 as part of the RRTs for the Gulf States. EPA has and will continue to do all that is necessary to respond to this emergency including standing up the Emergency Operations Center from EPA Headquarters to provide operational support on resolving scientific and policy issues associated with use of dispersants, interpreting analytical data from the field, working closely with Regions 4 and 6 on waste management disposal, as well as interagency coordination. EPA will track all funds spent related to this oil spill for recovery from responsible parties. The Administration is committed to recovering the costs incurred for the removal of the oil and the damages caused by this catastrophe from those who are responsible and ensuring that the American people do not pay for any of the costs and damages for which others are responsible.

#### **RESEARCH AND DEVELOPMENT**

Historically, EPA has had a modest oil spill research and development program. Events of the past several weeks associated with the Deepwater Horizon oil spill have made it evident that this modest investment must increase to address the uncertainties that have arisen. The Administration has requested supplemental funds for dispersant research associated with the



Deepwater Horizon oil spill. If appropriated, EPA plans to engage institutions who have the knowledge and expertise to assist the Agency. The \$2.0 million requested by the President, will support research that will begin to provide a greater understanding of the short and long term implications to the environment and public health associated with the spill and the application, surface and undersea, of dispersants. We will also further our research efforts to include innovative and expansive approaches to spill remediation.

The President's request represents an important step forward to improve our understanding of the impacts and implications of the use of dispersants and exposure to the dispersed oil and the potential impact on the environment and human health. EPA intends to pursue research over time which will address the mechanisms of environmental fate, effects, and transport of the application of dispersants on released crude oil. This will be conducted by both assessing the risks to human health from exposure to chemical dispersants and chemically-dispersed oil mixtures through direct and indirect exposure and increasing our understanding of chemical dispersants and dispersed oil, including its toxicity over a broad range of aquatic and terrestrial ecosystems and species. EPA will also collaborate with other federal agencies to study the environmental and human health impacts of dispersants and chemically-dispersed oil. This research will address the mechanisms of environmental fate, effects and transport of released crude oil and the application of dispersant.

#### **EPA'S OIL SPILL RESPONSE COORDINATION WITH THE USCG**

The National Contingency Plan (NCP) is the federal government's blueprint for responding to both oil spills and hazardous substance releases. Additionally, it provides the federal government with a framework for notification, communication, and responsibility for oil

spill response. The NCP established the National Response Team (NRT), comprised of fifteen federal agencies, to assist responders by formulating policies, providing information, technical advice, and access to resources and equipment for preparedness and response to oil spills and hazardous substance releases. EPA serves as chair of the NRT and the USCG serves as vice-chair. However, the USCG is the incident-specific Chair for the Deepwater Horizon oil spill response.

In addition to the NRT, there are thirteen RRTs, one for each of EPA's ten regional offices and one each for Alaska, the Caribbean, and the Pacific Basin. RRTs are co-chaired by each EPA Region and its USCG counterpart. The RRTs are also comprised of representatives from other federal agencies and state representation, and frequently assist the federal OSCs who lead spill response efforts. The RRTs help OSCs in their spill response decision making, and can help identify and mobilize specialized resources. For example, through the RRT, the OSC can request and receive assistance on natural resource issues from the Department of the Interior, or borrow specialized equipment from the Department of Defense. Involvement of the RRT in these response decisions and activities helps ensure efficient agency coordination while providing the OSC with the assistance necessary to conduct successful spill response actions.

Each spill has only one OSC, designated from either the USCG or the EPA. EPA is responsible for maintaining the NCP Product Schedule, which lists chemical and biological products available for federal OSCs to use in spill response and cleanup efforts. Due to the unique nature of each spill, and the potential range of impacts to natural resources, OSCs help determine which products, if any, should be used in a particular spill response. If the application of a product is pre-authorized by the RRT, then the OSC may decide to use the product in a

particular response. If the product application does not have pre-authorization from the RRT, then the OSC must consult with the RRT regarding its use.

#### **THE DEEPWATER HORIZON OIL SPILL**

On April 22, 2010, the mobile offshore drilling unit (MODU) Deepwater Horizon, owned and managed by Transocean and contracted by BP P.L.C., sank after an explosion and a severe fire. Since that time, several thousand barrels per day of crude oil is being released into the Gulf of Mexico. The USCG, as the federal On-Scene Coordinator for the oil spill response, is implementing its responsibility to lead the federal environmental response actions in the coastal zone and is overseeing all response operations, including those made by BP.

The Secretary of the Department of Homeland Security has classified this oil discharge as a Spill of National Significance (SONS) and the USCG Admiral Thad Allen has been designated the National Incident Commander (NIC). EPA has integrated some of its staff into the Unified Area Command (UAC) as well as the local incident command posts. We have developed monitoring and assessment plans for surface and subsurface dispersant application, and we are providing technical assistance, air monitoring, and water quality sampling at several locations in Louisiana, Mississippi, and Alabama to assist in the oil spill response.

##### **Air quality monitoring**

EPA responders are monitoring for particulate matter, hydrogen sulfide, and total volatile organic compounds (VOCs) associated with the oil as well as the in situ burns. We are also monitoring ozone levels and testing for specific VOCs that are present in crude oil: benzene, toluene, ethylbenzene, xylene and naphthalene. We are operating a network of fixed air quality monitoring stations in the Gulf Coast region and specially deployed monitoring and sampling

equipment. In addition, EPA has deployed its twin engine aircraft, the Airborne Spectral Photometric Collection Technology (ASPECT), to detect chemical constituents associated with the oil spill, as well as to monitor for particulates over the in situ burns. We have also brought in two Trace Atmospheric Gas Analyzers (TAGA) mobile laboratory “buses” which are capable of real-time sampling and analysis, and can detect a range of chemical contaminants at very low levels. The TAGA mobile labs have specialized sampling equipment that can be used at remote locations to measure air quality. Additional response air monitoring and sampling sites have been set up by EPA response teams near Venice and Chalmette, LA, Mobile, AL and Ocean Springs, MS. In addition, we are also coordinating data collected from state monitors, and we are analyzing and tracking this information daily to note any unusual readings that might indicate changes in air quality that could trigger a call for action to protect public health.

**Water quality monitoring**

EPA teams are conducting surface water monitoring activities along the Gulf Coast. EPA is also collecting water quality and sediment samples in areas not yet affected by the oil release, in order to establish a data baseline. Based on the tests at the shoreline completed to date, water quality does not currently pose an increased risk to aquatic life in tested areas; however, EPA will continue to sample and test water to more fully assess water quality. We are currently developing post-impact water quality monitoring plans which will enable us to analyze water and sediment samples to detect chemicals found in oil as well as the chemical constituents of the dispersants that are being used in the oil spill response.

**Use of Dispersant**

When this crisis occurred, the federal OSC granted BP authorization to use approved dispersant on oil on the surface of the water in an effort to mitigate the shoreline impacts of the

oil spill on fisheries, nurseries, wetlands and other sensitive environments. The OSC's authorization includes water quality monitoring and the dispersant being applied in order to ensure the protection of the environment and public health in affected areas. Dispersants contain a mixture of chemicals, that, when applied directly to the spilled oil, can break down the oil into smaller drops that can sink below the water's surface. Dispersed oil forms a "plume" or "cloud" of oil droplets suspended in the water. The dispersed oil mixes vertically and horizontally into the water column and is rapidly diluted. Naturally occurring bacteria and other microscopic organisms' biological processes can degrade the oil droplets over time. EPA is constantly monitoring air and water quality in the Gulf Coast area to ensure the health of nearby residents in protected. The results are posted on EPA's web site as it becomes available.

Because of the magnitude of the Deepwater Horizon Oil Spill, the RRT authorized BP to conduct tests of a new approach to use dispersants underwater, at the source of the oil leaks. The test data was evaluated to determine the efficacy of subsurface application and it was determined that BP can move forward with full-scale application contingent upon following an adaptive monitoring plan. An EPA/USCG joint directive specifies requirements for BP to follow for subsurface dispersant applications and includes evaluation criteria for the RRT to shut-down subsurface application. Available data from each subsurface application is analyzed each evening jointly by EPA and the National Oceanic and Atmospheric Administration (NOAA) to determine whether subsurface dispersant application can be continued. Since the subsurface application was initiated, dissolved oxygen levels and the biological tests are within normal ranges. Initial studies indicate that the subsurface application of approximately 10,000-15,000 gallons of dispersants have the equivalent effect on the oil as the surface application of

approximately 50,000 gallons of dispersant. Thus, the subsurface application of dispersants is much more efficient and could result in far less dispersants being released into the environment.

It is important to understand that the use of dispersants has environmental trade-offs. Dispersants are generally less toxic than the oils they break down. We know that surface use of dispersants decreases the environmental risks posed by oil spills to shorelines and organisms that live in surface waters. When used this way, dispersants usually break down over the course of weeks. However, the long term effects of dispersants on aquatic life are unknown, which is why EPA and the Coast Guard are requiring BP to implement a sampling and monitoring plan. The federal oil spill response ensures that dispersant operations are constantly monitored to detect any adverse environmental effects that may outweigh the expected benefits of applying dispersants to the Deepwater Horizon oil spill.

However, with the successful use of subsurface application to date, EPA and USCG have issued an Order to BP to eliminate, if operationally possible, surface dispersant application. BP was also directed to find an alternative less toxic dispersant. BP argued that one was not available, but EPA determined that BP's analysis was insufficient. EPA is performing its own scientific verification of the data BP presented and is conducting a separate scientific analysis to determine whether a less toxic alternative is available at the needed volumes.

#### **NEXT STEPS**

The Deepwater Horizon Oil Spill is a massive and potentially unprecedented environmental disaster that has already impacted the lives and the livelihoods of countless people in the Gulf Coast region. While BP is a responsible party for this oil spill, EPA has been working alongside many federal and state agencies to implement emergency oil spill response

actions since day one. EPA's Headquarters Emergency Operations Center is fully operational and is monitoring the overall oil spill response operation.

EPA is also preparing for a potential support role in shoreline assessment and cleanup operations. EPA's support work may include continued sampling and analysis, identifying and prioritizing sensitive resources, and determining the need for cleanup and recommending cleanup methods and endpoints. We are working within the Unified Command to promote oil recovery and recycling and also to identify landfill locations for any collected oil, oil contaminated booms and other contaminated response materials. EPA, in coordination with the Gulf Coast states, will continue to provide information to both workers and the public about monitoring results and will help to address local community concerns.

#### **CONCLUSION**

EPA will continue to provide full support to the USCG and the UC, and will continue to take a proactive and robust role in monitoring, identifying, and responding to potential public health and environmental concerns. As local Gulf Coast communities assess the impact of the Deepwater Horizon oil spill on their economies, EPA, in partnership with other federal, state, and local agencies, as well as other community stakeholders, will devote its efforts necessary to assist in the oil spill response. At this time I welcome any questions you may have.

Mr. MARKEY. Thank you, Administrator Jackson.

Our next witness is Dr. Larry Robinson.

He is the Assistant Secretary of Commerce for Oceans and Atmosphere at the National Oceanic and Atmospheric Administration. Dr. Robinson guides policy and program direction for NOAA's conservation protection and resource management priorities.

Upon being confirmed for the position on May 7, 2010, Dr. Robinson went to the Gulf Coast to help coordinate NOAA's scientific resources throughout the region. Prior to his appointment, Dr. Robinson was the vice president for research and a professor at Florida A&M University.

Whenever you are ready, Mr. Robinson.

#### **STATEMENT OF THE HONORABLE LARRY ROBINSON**

Mr. ROBINSON. Thank you, Mr. Chairman, Ranking Member Upton, and members of the subcommittee, for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's role in response to the BP Deep Horizon oil spill.

I wish to begin by letting the families of the 11 people who lost their lives in the explosion and sinking of the Deep Horizon know that we think of them every day. The 12,800 employees of NOAA working in the Gulf of Mexico and those around the country send our deepest condolences.

Because you already have my written testimony, I would like to simply summarize NOAA's role in the oil spill response and then provide a short update on NOAA's latest efforts.

NOAA's mission is to understand and predict changes in the earth's environment, and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs. NOAA is also a natural resource trustee, and is one of the Federal agencies responsible for protecting and restoring the coastal natural resources when they are affected by oil spills. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts of the Gulf Coast and the Nation as a whole as a result of the Deepwater Horizon oil spill.

NOAA is the Nation's scientific resource for the unified command and is responsible for coordinated scientific, weather, and biological response services. NOAA's experts have been assisting with the response from the very beginning of this spill. Offices throughout the agency have been mobilized, and hundreds of NOAA personnel are dedicating themselves to assist.

Over the past few weeks, NOAA has provided 24/7 scientific support to the U.S. Coast Guard in its role as Federal on-scene coordinator both on scene and through our Seattle operation center. This NOAA-wide effort support includes data of the trajectories of the oil spill, information management, overflight observations, and management, weather and river flow forecast, shoreline, and resource risk assessment, and oceanographic modeling support.

Now, a few specifics on seven activities of which NOAA has responsibility. NOAA's oceanographers continue to release updated oil spill trajectory maps showing the predicted trajectory of the oil



spill. These maps help inform shoreline operations, placement of booms, and oil recovery efforts at the surface.

NOAA's current forecast show offshore winds through Saturday morning with magnitudes of 6 to 12 knots. Yesterday's overflights observed significant amounts of oil offshore around the Mississippi Delta and near the Southern Chandeleur Islands. Although offshore winds may eventually lead to a reprieve in new shoreline impacts, the Mississippi Delta west of Timberlier Bay, Breton Sound, and the Chandeleur Islands continue to be threatened by shoreline contacts during NOAA's current forecast period of 72 hours.

The loop current. We continue to track the small amounts of oil that was detrained in the loop current late last week. Most of that surface oil is now caught in a counterclockwise eddy on the northern side of the loop current. And because the top of the loop current has now pinched off, any oil that was in the loop current will most likely be retained in the Gulf and not routed to the Florida strait or the Gulf current.

Flow rate. NOAA's scientists are part of the National Incident Command's flow rate technical group, which is designed to support the response and inform the public by providing scientifically validated information about the amount of oil flowing from the leaking well, while ensuring the vital efforts to cap the leak are not impeded.

Fisheries disaster declaration. On May 24, Commerce Secretary Gary Locke determined that there has been a fishery disaster in the Gulf of Mexico due to the economic impact on commercial and recreational fisheries from the ongoing Deep Horizon oil spill. The affected area includes the State of Louisiana, Mississippi, and Alabama. Secretary Locke made the determination under section 312(a) of the Magnuson-Stevens Act. The declaration was made in response to requests from Louisiana and Mississippi based on the loss of access to many commercial fisheries and the existing and anticipated environmental damage from this unprecedented event.

Fisheries closure and seafood safety. This past Tuesday, NOAA's National Marine Fishery Service modified the boundaries of the fisheries closed areas based upon the latest oil spill trajectories. The modified area increased the closed area to 54,096 square miles. This represents 22.4 percent of the Gulf of Mexico's exclusive economic zone. NOAA is sampling seafood inside and outside of the closed areas and working with the FDA to ensure that seafood is not contaminated and to guide decisions about when closed areas can be reopened.

Natural resource damage assessment. NOAA is coordinating the natural resource damage assessment effort with the Department of the Interior as a Federal co-trustee, as well as co-trustees in five States and representatives of at least one responsible party, British Petroleum. The focus currently is to assemble existing data on resources and their habitat, and collect baseline or pre-spill impact data. Data on all resources and habitat are also being collected.

Number seven. Social and environmental impact. NOAA is aggressively working with other agencies and non-Federal scientists to understand where oil is on the surface and below the surface and to evaluate the environmental impacts of both the spill and any associated mitigation efforts.

To close, I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impact of this spill.

Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

[The prepared statement of Mr. Robinson follows:]

**WRITTEN STATEMENT OF  
DR. LARRY ROBINSON  
ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
U.S. DEPARTMENT OF COMMERCE**

**HEARING ON  
RESPONSE EFFORTS TO THE GULF COAST OIL SPILL**

**HEARING BEFORE THE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT  
COMMITTEE ON ENERGY AND COMMERCE  
U.S. HOUSE OF REPRESENTATIVES**

**May 27, 2010**

Thank you, Chairman Markey and Members of the subcommittee, for the opportunity to testify on the Department of Commerce National Oceanic and Atmospheric Administration's (NOAA's) role in the response to the Deepwater Horizon oil spill. My name is Dr. Larry Robinson and I am the Assistant Secretary of Commerce for Oceans and Atmosphere of NOAA. I appreciate the opportunity to discuss the critical roles NOAA serves during oil spills and the importance of maximizing our contributions to protect and restore the resources, communities, and economies affected by this tragic event. Before I move to discuss NOAA's efforts, I would first like to express my condolences to the families of the 11 people who lost their lives in the explosion and sinking of the Deepwater Horizon.

NOAA's mission is to understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs. NOAA is also a natural resource trustee and is one of the federal agencies responsible for protecting and restoring the public's coastal natural resources when they are impacted by oil spills, hazardous substance releases, and impacts from vessel groundings on corals and seagrass beds. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts to the Gulf Coast and the Nation as a whole from the Deepwater Horizon oil spill. NOAA is fully mobilized and working tirelessly 24/7 to lessen impacts on the Gulf Coast and will continue to do so until the spill is controlled, the oil is cleaned up, the natural resource damages are assessed, and the restoration is complete.

My testimony today will discuss NOAA's role in the Deepwater Horizon response, natural resource damage assessment, and restoration; NOAA's assets, data, and tools on-scene; the importance of preparedness; and necessary future actions.

**NOAA'S ROLES DURING OIL SPILLS**

NOAA has three critical roles mandated by the Oil Pollution Act of 1990 and the National Contingency Plan:

1. Serves as a conduit for scientific information to the Federal On-Scene Coordinator to provide trajectory predictions for spilled oil, overflight observations of oil on water, identification of environmental areas that are highly valued or sensitive, and shoreline surveys of oil to determine clean-up priorities.
2. Conduct a joint natural resource damage assessment with other trustees with the goal of restoring any ocean and coastal resources harmed by the spill. This includes fulfilling the role of Natural Resource Trustee for impacted marine resources.
3. Represent Department of Commerce interests in spill response decision making activities through the Regional Response Team.

The U.S. Coast Guard (USCG) has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinator delivers expert scientific support to the USCG in its role as Federal On-Scene Coordinator. NOAA's Scientific Support Coordinators are located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous materials into the oceans or atmosphere.

Using experience, expertise, and state-of-the-art technology, NOAA forecasts the movement and behavior of spilled oil, evaluates the risk to resources, conducts overflight observations and shoreline surveys, and recommends protection priorities and appropriate clean-up actions. NOAA also provides spot weather forecasts, emergency coastal survey and charting capabilities, aerial and satellite imagery, and real-time coastal ocean observation data to assist response efforts. Federal, state, and local entities look to NOAA for assistance, experience, local perspective, and scientific knowledge.

NOAA serves the Nation by providing expertise and a suite of products and services critical for making science-based response decisions that prevent further harm, restore natural resources, and promote effective planning for future spills. Federal, state, and local agencies across the country called upon NOAA's Office of Response and Restoration (OR&R) for scientific support 200 times in 2009.

#### **NOAA'S RESPONSE EFFORTS FOR DEEPWATER HORIZON OIL SPILL**

NOAA's experts have been assisting with the response from the beginning, providing coordinated scientific weather and biological response services when and where they are needed most.

At 2:24am (central time) on April 21, 2010, NOAA's OR&R was notified by the USCG of an explosion and fire on the Mobile Operating Drilling Unit (MODU) Deepwater Horizon, approximately 50 miles southeast of the Mississippi Delta. The explosion occurred at approximately 10:00pm on April 20, 2010. Two hours, 17 minutes after notification by the USCG, NOAA provided our first spill forecast predictions to the Unified Command in Robert, Louisiana. NOAA's National Weather Service Weather Forecast Office in Slidell, LA received the first request for weather support information from the USCG at 9:10am on April, 21, 2010 via telephone. The first graphical weather forecast was sent at 10:59am to the USCG District Eight Command Center in New Orleans. Support has not stopped since that first request for

information by the USCG. Over the past few weeks, NOAA has provided 24/7 scientific support, both on-scene and through our Seattle Operation Center. This NOAA-wide support includes twice daily trajectories of the spilled oil, information management, overflight observations and mapping, weather and river flow forecasts, shoreline and resource risk assessment, and oceanographic modeling support. NOAA has also been supporting the Unified Command in planning for open water and shoreline remediation and analyses of various techniques for handling the spill, including open water burning and surface and deepwater application of dispersants. Hundreds of miles of coastal shoreline were surveyed to support clean-up activities.

Offices throughout the agency have been mobilized and hundreds of NOAA personnel are dedicating themselves to assist. In addition to these activities, I would like to highlight several of NOAA's assets that are assisting with the overall oil spill response and assessment efforts.

- NOAA's National Weather Service is providing critical 24/7 weather support dedicated to the spill, as well as on-site weather support at multiple command centers. Special aviation marine wind and wave forecasts are being prepared to support response activities. A marine meteorologist was deployed to the Joint Operations Center in Houma, LA on April, 27, 2010. Beginning on April 28, 2010, hourly localized 'spot' forecasts were requested by USCG and NOAA OR&R in support of oil burns and eventually chemical dispersion techniques. Longer range forecasts are a critical component to plan containment and response actions. NOAA's National Data Buoy Center data is also being incorporated into oil trajectory forecasts.
- NOAA's National Ocean Service is providing: custom navigation products and updated charts to help keep mariners out of oil areas; updates from NOAA's extensive network of water-level, meteorological, and near-shore current meters throughout the Gulf; in-situ observations data; economic assessment expertise; aerial photo surveys to assess pre-and post landfall assessments; and pre- and post- oil contamination assessments of oysters at Mussel Watch sites.
- NOAA's Office of Oceanic and Atmospheric Research (OAR) dispatched the R/V Pelican ship along with National Institute for Undersea Science and Technology cooperative scientists to collect samples as soon as possible. OAR is advising on airborne and oceanic dispersion modeling. NOAA and university scientists are also flying NOAA's P3 hurricane hunter aircraft to drop expendable probes to map the ocean current, salinity, and thermal structure from 1000 m depth to the surface that will refine and calibrate loop current modeling. These deployments will be critical for helping to track where the oil might be headed and whether other areas of the United States will be impacted by the Deepwater Horizon oil spill. In addition, NOAA-funded Sea Grant programs in Louisiana and other Gulf Coast states will be awarding grants for rapid response projects to monitor the effects of the oil spill on Louisiana's coastal marshes and fishery species.
- NOAA's National Marine Fisheries Service (NMFS) is addressing issues related to marine mammals, sea turtles, seafood safety, and fishery resources. On May 2, 2010, NMFS closed commercial and recreational fishing in oil-affected portions of federal waters in the Gulf for ten days. NOAA scientists are on the ground in the spill area taking water and seafood samples to ensure the safety of seafood and fishing activities.

On May 7, NMFS made effective an amendment to the emergency closure rule which adjusted the shape of the closed area to be more consistent with the actual spill location. On May 11, 2010, NMFS filed an emergency rule to establish a protocol to more quickly and effectively revise the closing and opening of areas affected by the oil spill. Due to the shifting currents and winds, rapid changes in the location and extent of the spill are occurring, which requires NMFS to update the dimensions of the closed area, as necessary, to ensure fisher and consumer safety without needlessly restricting productive fisheries in areas that are not affected by the spill. In addition, NOAA's Marine Animal Health and Stranding Response Program is assisting the Wildlife Operations Branch of the Unified Command to provide expertise and support for the response efforts to the Deepwater Horizon oil spill. Established protocols and procedures for treating marine wildlife impacted by oil have been developed by NOAA and its partners and are being adapted to address the particular needs of this event.

- NOAA's National Environmental Satellite, Data, and Information Service is providing satellite imagery from NOAA's Geostationary Operational Environmental Satellites and Polar Operational Environmental Satellites, and is leveraging data from the National Aeronautics and Space Administration and international satellites to develop experimental and customized products to assist weather forecasters and oil spill response efforts. NOAA's National Data Centers are also providing data from its archives that are being used to help provide mapping services for the impacted areas, and temperature, salinity, current, and surface elevation (tides) with forecasts up to 72 hours out from the Navy Global Ocean Coastal Model.
- NOAA's Office of Marine and Aviation Operations has 3 aircraft providing support for overflights that are being conducted on a near daily basis.
- The NOAA General Counsel's Office is working closely with state and federal co-trustee agencies to undertake a natural resource damage assessment and other steps to prepare claims for response costs and damages for natural resource injuries associated with the oil spill. The Office is also addressing a wide range of legal questions that arise in conjunction with the spill.
- The NOAA Communications office has provided two to three communications specialists to assist in the Joint Incident Center with press and all communications efforts. Within NOAA, the staff has been facilitating scientist interviews with media and working with the Office of Response and Restoration to update daily a dedicated NOAA Deepwater Horizon response web site with the latest information and easy-to-use fact sheets on topics ranging from oil and coral reefs to an explanation of the booms being used.

#### **NOAA'S ROLE IN DAMAGE ASSESSMENT AND RESTORATION**

Oil spills affect our natural resources in a variety of ways. They can directly impact our natural resources, such as the oiling of marine mammals. They can diminish the ecological services provided by coastal and marine ecosystems, such as the loss of critical nursery habitat for shrimp, fish, and other wildlife that may result from oiled marshes. Oil spills may also diminish how we use these resources, by affecting fishing, boating, beach going, and wildlife viewing opportunities.

Stewardship of the Nation's natural resources is shared among several federal agencies, states, and tribal trustees. NOAA, acting on behalf of the Secretary of Commerce, is the lead federal trustee for many of the nation's coastal and marine resources, and is authorized pursuant to the Oil Pollution Act of 1990 (OPA) to recover damages on behalf of the public for injuries to trust resources resulting from an oil spill. OPA encourages compensation in the form of restoration and this is accomplished through the Natural Resource Damage Assessment (NRDA) process by assessing injury and service loss, then developing a restoration plan that appropriately compensates the public for the injured resources. NOAA scientists and economists provide the technical information for natural resource damage assessments and work with other trustees and responsible parties to restore resources injured by oil spills. To accomplish this effort, NOAA experts collect data, conduct studies, and perform analyses needed to determine whether and to what degree coastal and marine resources have sustained injury from oil spills. They determine how best to restore injured resources and develop the most appropriate restoration projects to compensate the public for associated lost services. Over the past 20 years, NOAA and other natural resource trustees have recovered over \$500 million worth of restoration projects from responsible parties for the restoration of the public's wetlands, coral reefs, oyster reefs, and other important habitats.

The successful recovery of injured natural resources depends upon integrated spill response and restoration approaches. The initial goals of a response include containment and recovery of floating oil because recovery rates for floating oil can be quite high under certain conditions. As the oil reaches the shoreline, clean-up efforts become more intrusive and oil recovery rates decline. At this point, it becomes important to recognize that certain spill response activities can cause additional harm to natural resources and actually slow recovery rates. Such decision points need to be understood so that cost effective and successful restoration can take place. NOAA brings to bear over 20 years of experience and expertise to these issues. Continued research on clean-up and restoration techniques and the recovery of environmental and human services after oil spills may improve such decision-making.

#### **NOAA'S DAMAGE ASSESSMENT AND RESTORATION EFFORTS FOR THE DEEPWATER HORIZON OIL SPILL**

At the onset of this oil spill, NOAA quickly mobilized staff from its Damage Assessment Remediation and Restoration Program to begin coordinating with federal and state co-trustees and the responsible parties, to begin collecting a variety of data that are critical to help inform the NRDA. NOAA is coordinating the NRDA effort with the Department of the Interior as a federal co-trustee, as well as co-trustees in five states and representatives for at least one responsible party (BP).

Although the concept of assessing injuries may sound relatively straightforward, understanding complex ecosystems, the services these ecosystems provide, and the injuries caused by oil and hazardous substances takes time — often years. The time of year the resource was injured, the type of oil or hazardous substance, the amount and duration of the release, and the nature and extent of clean-up are among the factors that affect how quickly resources are assessed and restoration and recovery occurs. The rigorous scientific studies that are necessary to prove injury to resources and services may also take years to implement and complete. The NRDA process

described above ensures an objective and cost-effective assessment of injuries — and that harm to the public's resources is fully addressed.

While it is still too early in the process to know what the full scope of the damage assessment will be, NOAA is concerned about the potential impacts to fish, shellfish, marine mammals, sea turtles, birds, and other sensitive resources, as well as their habitats, including wetlands, beaches, bottom sediments, and the water column. This may include national estuarine research reserves and national marine sanctuaries. The natural resources co-trustees may also evaluate any lost value related to the use of these resources, for example, as a result of fishery and beach closures.

#### **VALUE OF READINESS**

This event is a grave reminder that spills of national significance can occur despite the many safeguards and improvements that have been put in place since the passage of the OPA. Although the best remedy is to prevent oil spills, oil spills remain a concern given the offshore and onshore oil infrastructure, pipes and vessels that move huge volumes of oil through our waterways.

To mitigate environmental effects of future spills, responders must be equipped with sufficient capacity and capabilities to address the challenge. Response training and exercises are essential to maintaining capabilities. Continuous training, improvement of our capabilities, maintenance of our capacity, and investments in high priority, response-related research and development efforts will ensure that the nation's response to these events remains effective. Training and coordination with other federal, state and local agencies that might have response and restoration responsibilities is critical to success in mitigating effects of future spills.

Just two months ago, NOAA participated in an oil spill exercise that focused on a hypothetical spill of national significance. This type of exercise is held every three years to sharpen the Nation's ability to respond to major oil spills at all levels of government. Led by the USCG, this exercise included more than one thousand people from twenty state and federal agencies as well as industry. This year's exercise centered on a simulated tanker collision off the coast of Portland, ME resulting in a major oil spill causing environmental and economic impacts from Maine to Massachusetts. Lessons learned from this and similar drills have improved our readiness to respond to oil spills. One tool that was successfully incorporated into this recent exercise is called the Environmental Response and Management Application (ERMA). This tool was developed by NOAA to streamline the integration and sharing of data and information, and certain components of this tool are now being used in the Deepwater Horizon response effort. ERMA is a web-based Geographic Information System tool designed to assist both emergency responders and environmental resource managers who deal with events that may adversely impact the environment. In the recent drill, ERMA allowed for the integration of current science, information technology, and real-time observational data into response decision-making. It allowed the latest information that was collected from a variety of efforts related to spills of national significance to be integrated, displayed on a map and shared for use across the Incident Command structure. Although not fully functional in the Gulf of Mexico, ERMA is providing benefits for the Deepwater Horizon response, many of which were first tested during the recent oil spill exercise. This recent drill also incorporated the damage assessment efforts of the



trustees, which resulted in improved communications and leveraging of resources and information.

#### ACTIVITIES TO IMPROVE FUTURE RESPONSE EFFORTS

Activities that would benefit the Nation by improving our ability to quickly respond to and mitigate damages from future spills include:

- **Response capacity** — NOAA's Office of Response and Restoration is fully engaged in responding to the Deepwater Horizon spill. Although unlikely, if another large spill was to occur simultaneously in another location across the United States, NOAA would have difficulty responding to its complete ability. Additional expertise in analytical chemistry, environmental chemistry, biology, oceanography, natural resource damage assessment, administrative functions, and information management would help plan and prepare activities between spills including training, development of area plans and response protocols, drafting and reviewing response job aids, and coordinating with regional responders.
- **Response effectiveness** — The use of simulated drills and the continued development of tools and strategies can only increase the effectiveness of oil spill response. Specific activities that would increase response effectiveness include:
  - ***Environmental Sensitivity Index Maps*** — Environmental Sensitivity Index (ESI) maps provide information that helps reduce the environmental, economic, and social impacts from oil and chemical spills. Spill responders are utilizing NOAA's ESI maps to identify priority areas to protect from spreading oil, develop cleanup strategies to minimize impacts to the environment and coastal communities, and reduce overall cleanup costs.
  - ***Data Management Tools for Decision Making*** — The key to effective emergency response is efficiently integrating current science, information technology, and real-time observational data into response decision-making. NOAA has developed the ERMA, which integrates real-time observations (e.g., NOAA National Buoy Data Center data, weather data, shoreline data, vessel traffic information, etc.) with archived data sources (e.g., NOAA's National Oceanographic Data Center's historical data) to aid in evaluating resources at risk, visualizing oil trajectories, and for planning rapid tactical response operations, injury assessment and habitat restoration. Having access to retrospective data is critical to bring value to real-time observational data being collected. For the Deepwater Horizon oil spill, certain components of the Gulf of Mexico ERMA are functional and being used on an *ad hoc* basis. The only fully functional ERMA are in the U.S. Caribbean and New England.
  - ***Use of Relevant Technologies*** — Better use of remote-sensing technologies, unmanned aerial vehicles, and an improved ability to access and use real-time observation systems would optimize clean-up operations. For example, when oil spreads across the water it does not do so in a uniform manner. Oil slicks can be quite patchy and vary in thickness. The effectiveness of response options — the booms, skimmers, and dispersants — depends on whether they are applied in the

areas of the heaviest oil. NOAA's trajectory modeling and visual observations obtained through overflights are helping direct the application of spill technologies, but remote sensing technology could be used to more effectively detect oil, determine areas of heaviest amounts of oil, and then this information could be used to direct oil skimming operations and increase the recovery of spilled oil. Traditional methods of visual observation can be difficult at night or in low visibility conditions, as is the case with Deepwater Horizon. In such situations, enhanced remote sensing technology would allow NOAA to improve the trajectory models it produces for the Unified Command.

- ***Real-time Observation Systems*** — Real-time data on currents, tides, and winds are important in driving the models that inform us on the likely trajectory of the spilled oil. As the Integrated Ocean Observing System generates more data from technological advances like high frequency radar, the prediction of oil location can be improved by pulling these observations into trajectory models in real-time.
- **Research and development** — Research and development is critical to ensure the latest science informs response efforts. Priority areas for future research and development include:
  - ***Fate and Behavior of Oil Released at Deep Depths*** — A better understanding is needed of how oil behaves and disperses within the water column when released at deep depths, such as happened with the Deepwater Horizon oil spill. This is also true regarding the use of dispersants in deep water. This information is critical to develop oil spill trajectory models and improve our understanding of the potential short- and long-term effects of dispersants on the environment.
  - ***Long-Term Affects of Oil*** — Spilled oil can remain on the shoreline and in wetlands and other environments for years. More than twenty years later, there is still oil in Prince William Sound from the Exxon Valdez spill. Research is needed to improve our understanding of the long-term effects of oil on sensitive and economically important species. This understanding will improve decision making during a response and allow us to determine the best approach to clean up.
  - ***Arctic*** — Continued acceleration of sea-ice decline in the Arctic Ocean as a consequence of global warming may lead to increased Arctic maritime transportation and energy exploration that in turn may increase the potential of oil spills in the Arctic. Recent studies, such as the Arctic Monitoring and Assessment Programme's Oil and Gas Assessment, indicate that we currently lack the information to determine how oil will behave in icy environments or when it sinks below the surface. We also lack a basic understanding of the current environmental conditions, which is important for conducting injury assessments and developing restoration strategies.
  - ***Mapping Oil Extent*** — Current use of NOAA-generated experimental products suggest that data from space-based synthetic aperture radar could assist us in detecting and refining the areal extent of oil and provide information in the decisions about where resources could be deployed.
  - ***Oil Detection in Water Column and Seafloor*** — In addition to depth data, modern multibeam echo sounders record acoustic returns from the water column and acoustic backscatter amplitude returns from the seafloor. In limited research applications,

these systems have been able to detect oil in the water column and on the seafloor. Sensors on autonomous vehicles that detect the presence of oil and gas in the water column are another detection technology. If these technologies could be used to provide highly accurate information on where oil is, and where it isn't, such information would be of significant benefit to a spill response such as Deepwater Horizon, where timely and precise placement of limited resources are critical to mitigate spill impacts. This developmental effort could provide very useful data for later response and restoration efforts.

- ***Human Dimensions*** — Research on how to incorporate impacted communities into the preparedness and response processes could help to address the human dimensions of spills, including social issues, community effects, risk communication methods, and valuation of natural resources.

#### **CONCLUSION**

NOAA will continue to provide scientific support to the Unified Command. NRDA efforts in coordination with our federal and state co-trustees have begun. I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impacts of this spill. Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

Mr. MARKEY. Thank you, Dr. Robinson.

Our next witness is Mr. David Hayes. He is the Deputy Secretary of the U.S. Department of the Interior. Mr. Hayes served as counselor to Interior Secretary Bruce Babbitt and Deputy Secretary of the Interior during the Clinton administration.

I understand that you will have to leave at 4:00 to attend to spill response matters, Mr. Hayes. So please begin your testimony.

**STATEMENT OF THE HONORABLE DAVID J. HAYES**

Mr. HAYES. Thank you, Mr. Chairman, also Ranking Member Upton, and members of the subcommittee. I will give a few oral remarks to accompany the written testimony from the Department. [The information follows:]

**STATEMENT OF  
S. ELIZABETH BIRNBAUM, DIRECTOR  
MINERALS MANAGEMENT SERVICE  
DEPARTMENT OF THE INTERIOR  
BEFORE THE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT  
COMMITTEE ON ENERGY AND COMMERCE  
U.S. HOUSE OF REPRESENTATIVES**

**MAY 27, 2010**

Thank you, Chairman Markey, Ranking Member Upton, and Members of the Committee, for the opportunity to discuss current activities at the Department of the Interior related to oil and gas exploration on the Outer Continental Shelf, and in particular, the Minerals Management Service's (MMS) participation in the ongoing response to the explosion of the Deepwater Horizon drilling rig.

Before I begin my testimony, I want to express how saddened I and all MMS staff are over the tragedy that began with the loss of life on April 20, on board the Deepwater Horizon, and continues as we speak with the oil spill in the Gulf. Many MMS staff have worked their entire careers in an effort to prevent this kind of thing from happening, and we will not rest until we determine the root causes so that we do everything possible to reduce the risk of its happening again.

The Deepwater Horizon oil spill has been declared a "spill of national significance" by the Department of Homeland Security and is of grave concern to the Minerals Management Service and the Department of the Interior. The Obama Administration and the Department are

dedicating every available resource to ensure that BP and other responsible parties meet their responsibilities to stop the flow of oil and clean up the pollution, and to comprehensively and thoroughly investigate these events.

At the President's direction, his entire team is dedicated to making sure the oil spill is stopped, the cleanup is completed, and the people, the communities, and the affected environment are made whole. We are fighting the battle on many fronts. MMS has chiefly been involved in overseeing efforts to stop the flow of oil permanently, in investigating the root causes of the explosion and subsequent oil spill, and in establishing new safety measures for oil and gas drilling.

I will focus my testimony today on MMS's roles and activities in the response effort. At present, approximately 170 MMS employees are stationed at various locations and command stations throughout the Gulf region responding to this crisis. From the night of April 20, MMS's highest priority has been to shut off the source of oil. Permanent closure of the well will take several weeks yet as BP finishes drilling a relief well to stop the flow of oil from the damaged well at its source. In addition to authorizing the drilling of two relief wells, we also have a team stationed at BP headquarters in Houston, overseeing efforts to engineer a solution that can stop the flow of oil at the wellhead. That effort has been joined by industry experts, scientists from the Department of Energy's National Labs, and Dr. Marcia McNutt, the director of the U.S. Geological Survey, all focusing their expertise on strategies to kill the well.

MMS's response to this Deepwater Horizon event began immediately upon notification of the explosion.

Staff were dispatched to the BP and Transocean Incident Command Posts in Houston and they were on site the morning of April 21. The same day, MMS established an Emergency Operations Center at our Gulf of Mexico Regional Office in New Orleans. By Friday, April 23, we had posted additional personnel at the Incident Command Centers for BP and Transocean in Houston, and at the MMS Emergency Operations Center, the Joint Information Center (JIC), the Unified Command and the U.S. Coast Guard Area (USGC) Command in New Orleans.

On April 23, MMS staff began working closely with BP to develop an acceptable exploration plan for the two relief wells that can permanently seal the leaking well. (Only one relief well is necessary; the second is being drilled as a precautionary back-up.) By April 26, Applications for Permit to Drill (APDs) for both relief wells were submitted by BP and underwent review by MMS engineers and management. Before approving the APDs, MMS had to review and approve all elements required in the APD. Some of these elements include the safety equipment such as the blow out preventers and diverters; well design; casing, cementing and drilling fluids programs; and many others. Additional testing measures were proposed by BP and required by MMS to increase the safety of the relief wells, which will go as deep as the original well and reach the same oil and gas reservoir.

Concurrently, the drilling rigs *Development Driller III* and *Development Driller II* were being moved to the site of the Deepwater Horizon oil spill. Drilling commenced on the first relief well

on May 2. MMS is actively overseeing all drilling and support operations for the relief wells, 24 hours a day - 7 days a week, with MMS personnel located on the *Development Driller III* (drilling relief well #1), *Development Driller II* (drilling relief well #2), and the *Q4000* (a deepwater intervention vessel assisting in the relief well activities).

Even before the relief well plans were submitted, MMS was also overseeing BP's efforts to close off the flow of oil at the wellhead. MMS oversight of this BP effort continues to this day. Initial attempts to close the blow-out preventer (BOP) using the approved secondary mechanism of a "hot stab" from a remote operating vehicle (ROV) did not succeed. Since then, efforts to re-engineer the BOP stack while it sits on the wellhead have had varying degrees of success. BP is currently attempting a "top kill" procedure to close off the flow at the wellhead. As we speak, final preparations are being made to push drilling mud into the well at a rate that will counteract the pressure of the oil and gas, and then, if the procedure is successful, seal the wellhead with cement. Again, all of these measures have been taken with the continuous oversight of MMS, and with BP, at our urging, consulting the broadest possible array of drilling engineers.

In addition to these intervention efforts at the wellhead, MMS also has overseen the effort to engineer containment of the flow of oil from the broken riser lying along the sea floor. BP has seen some success with the riser insertion tube tool, or RITT, which has brought some oil and gas directly to the surface and into a production vessel, reducing the amount of oil that is polluting the ocean. MMS personnel are on the vessel *Enterprise* monitoring the flow of liquid as it is brought onto the ship for containment and storage.



Currently, MMS's response is varied in both technical and geographic scope.

MMS engineers in Houston continue to review and provide input for various source control procedures and updates and recommendations to the MMS managers and engineers in the Unified Command in Robert, LA, prior to MMS approval of proposed activities. At the Unified Command, MMS regional managers actively participate in meetings, review and approve procedures, and provide support for ongoing Unified Command activities. MMS's regional engineers continue to provide information for the other command centers, MMS Headquarters and other Federal bodies, at the same time that they review procedures, and compile and send operation updates.

As I noted, another priority for MMS is to determine the root causes of these events. Under an agreement signed by Secretary Salazar and Secretary Napolitano, we have begun a joint investigation between the Coast Guard and MMS under the Coast Guard's formal Marine Board procedures to discover the root causes of the explosion and the resulting oil spill. That investigation will take several months. One major factor affecting this timeline is that investigators will need access to the BOP stack that must remain on the seabed until the well is permanently sealed. In addition, Secretary Salazar has established an Outer Continental Shelf Safety Oversight Board to conduct a full review of offshore drilling safety and technology issues. Also, later this week, the Secretary will deliver a report to the President on interim measures that can be taken to improve the safety of Outer Continental Shelf operations. And, at the request of the Secretary, the National Academy of Engineering, a highly regarded organization affiliated with the National Academy of Sciences, will conduct an independent, science-based analysis of the root causes of the Deepwater Horizon oil spill so that corrective steps can be taken to address

any engineering or mechanical shortcomings that may be uncovered. These efforts will all support the larger investigation the President has announced, which will be conducted by a special Presidential commission.

In addition to shutting down this well and investigating the root causes of the events, the MMS has taken several steps to increase offshore safety at the direction of the Secretary. We issued a safety alert to all operators reminding them of the urgency of conducting all operations within the requirements of MMS regulations and with the highest standards of safety in mind. Our offshore inspectors made an immediate sweep of inspections of all deepwater (water depth of 1000 feet or greater) rigs, and have now moved on to a thorough inspection tour of all deepwater production platforms. In accordance with the Secretary's direction, we also have placed a temporary moratorium on issuance of any permits for drilling new wells, pending the completion of the Secretary's report to the President regarding interim measures to increase drilling safety.

Broader reforms at MMS are also in the works. This tragedy and the massive spill for which BP and others bear responsibility have made the importance and urgency of the Secretary's reform agenda ever more clear. The Minerals Management Service has three distinct and conflicting missions - enforcement, energy development, and revenue collection - that must be divided. The Secretarial Order that Secretary Salazar signed last week will establish three separate entities as follows:

- The *Bureau of Ocean Energy Management* will be a new bureau under the supervision of the Assistant Secretary for Land and Minerals Management that

will be responsible for the sustainable development of the Outer Continental Shelf's conventional and renewable energy and mineral resources, including resource evaluation, planning, and other activities related to leasing.

- The ***Bureau of Safety and Environmental Enforcement*** will be a new bureau under the supervision of the Assistant Secretary for Land and Minerals Management that will be responsible for ensuring comprehensive oversight, safety, and environmental protection in all offshore energy activities.
- The ***Office of Natural Resources Revenue*** will be a new office under the supervision of the Assistant Secretary for Policy, Management, and Budget that will be responsible for the royalty and revenue management function including the collection and distribution of revenue, auditing and compliance, and asset management.

Over the next month, the Department will develop a schedule for implementing the reorganization in consultation with its jurisdictional Congressional committees. This reorganization will strengthen oversight of offshore energy operations, improve the structure for revenue and royalty collections on behalf of the American people, and help our nation build the clean energy future we need.

Finally, underscoring the importance of the Secretary's reorganization announcement, the Department of the Interior Inspector General issued a report this week detailing ethical lapses at

the Minerals Management Service (MMS) between 2000 and 2008. This report highlights the importance of Interior's ongoing agenda to reform the agency and of new ethics reforms implemented in early 2009. This deeply disturbing report is further evidence of the cozy relationship between some elements of MMS and the oil and gas industry. Several of the individuals mentioned in the Inspector General's report have resigned, been terminated, or referred for prosecution. Those individuals mentioned in the IG report for questionable behavior who are still with MMS will be placed on administrative leave pending the outcome of a personnel review. The Secretary has expressed his appreciation and full support of the Inspector General's strong work to root out the bad apples in MMS and we will follow through on her recommendations, including taking any and all appropriate personnel actions including termination, discipline, and referrals of any wrongdoing for criminal prosecution. The Secretary has also asked the Inspector General to expand her investigation to determine whether any of this reprehensible behavior persisted after the new ethics rules he implemented in 2009.

I assure you that MMS staff across the nation are fully engaged in response efforts to this tragedy, supporting our team members in the Gulf of Mexico Region, the Department and the Unified Command by providing information and personnel to support any necessary decisions and activities as we strive to respond to the immediate effects of this tragedy and ensure greater safety for drilling operations in the future.

Mr. Chairman, that concludes my prepared statement. I would be happy to respond to questions you or Members of the Committee have.

Mr. HAYES. We have been, as you would imagine, extraordinarily busy here on this matter since day one. The morning after the accident, I went down to the Gulf and was the first administration person working with Admiral Landry on setting up the command center. We have been working every day since then virtually 24/7 with several streams of work, obviously working to plug the leak.

Secretary Salazar has been in Houston four times. Dr. Marcia McNutt, the director of the U.S. Geological Survey, has been in Houston for most of the last three weeks working with Secretary Chu and the directors of the National Labs to provide Federal oversight and direction in connection with those high-tech activities.

Thirdly, we have been very active on the response effort side. The Department of the Interior has more than 600 personnel mobilized in the four command centers in the Gulf region, including some of our highest-ranking folks. Jon Jarvis, the director of the National Park Service, is our lead in the Mobile, Alabama, office, by way of example.

We have significant assets in the area. We have 40 National Park units and/or National Wildlife Refuge units in the area. And we are leading a lot of the natural response efforts on the natural resource damage response efforts.

We also have been doing some special science projects. As Dr. Robinson referred to, there has been a Flow Rate Task Force established, and Dr. Marcia McNutt has led that task force, our director of USGS. And she provided a briefing earlier today that updated and provided independent governmental estimates of the flow rate coming out of the leaks.

More broadly, I will just mention a couple of other important aspects of what we have been doing. Obviously, because of our jurisdiction over the Minerals Management Service, we have been deeply involved in addressing the safety issues that have arisen in connection with this disaster. We have started our own investigation, working with the United States Coast Guard. Secretary Salazar also commissioned an independent investigation by the National Academy of Engineering, which is under way.

Today, we submitted to the President a 30-day safety report that he requested, suggesting interim additional measures to increase the safety for offshore drilling. And, as you know, the President accepted that report and took a number of steps to ensure that we would not have additional problems until we could fully implement those safety requirements and also get the benefit of the input of the Presidential commission that he established and which is now under way.

We also, of course, have been undertaking broader reform efforts at the MMS. As you know, we have taken reform efforts with the Royalty-in-Kind Program and, most recently, have reorganized the MMS to separate out the enforcement function from the permitting function, and also to separate out the revenue function, which collects an average of \$13 billion per year.

I will leave it with that, Mr. Chairman. I look forward to questions.

Mr. MARKEY. Thank you, Mr. Hayes, very much.

Our next witness, Mr. Salt, is the principal deputy secretary of the Army. He provides policy for the Army Corps of Engineers. As-

sistant Secretary Darcy delivered the Army Corps prepared testimony, so Mr. Salt will be there to answer questions moving forward.

Our next witness is Rear Admiral James Watson.

Rear Admiral Watson assumed duties as deputy commander of the United States Coast Guard Atlantic Area Command in April of 2010. Prior to that, he served as the Atlantic area's first director of operations.

Rear Admiral Watson graduated from the Coast Guard Academy in 1978 with a degree in marine engineering, and he additionally has masters degrees in mechanical engineering, naval architecture, and strategic studies.

When you are ready, Admiral, please begin.

#### **STATEMENT OF REAR ADMIRAL JAMES WATSON**

Admiral WATSON. Good afternoon, Chairman Markey, Representative Upton, distinguished members of the committee.

First, I want to say that this is an incident that is a tragic incident for the people of South Louisiana, Mississippi, Alabama, and even parts of Florida.

I have been down there, and we are terrifically sensitive to the impacts that this has on them, and particularly also the people who have lost their loved ones on the Deepwater Horizon.

Since the night of the explosion, Federal, State, and local authorities and the responsible parties, BP and Transocean, have been working around the clock to secure the leak and mitigate environmental damages. My role as the deputy Federal on-scene coordinator is to support Rear Admiral Mary Landry, the Eighth Coast Guard District Commander. We will carry out our national policy and direction, and have oversight of all response operations as directed by the National Contingency Plan.

The Deepwater Horizon explosion on the night of April 20 set off an unfortunate chain of events. The event began as a search-and-rescue case, and within the first few hours of the explosion, 115 of the 126 crew members were safely recovered. After 3 days of continuous searching, the Coast Guard suspended the search for the 11 missing crew members. My deepest sympathies are for the families and friends of the Deepwater Horizon crew who lost their lives in the line of duty.

A massive oil spill response followed the sinking of the Deepwater Horizon, unprecedented in its scope, complexity, and indeterminate nature, the spill has required an extraordinary unified response across all levels of government, industry, and the communities of the five Gulf Coast States.

A federally-led incident command was quickly established to coordinate this massive operation. Employing lessons learned from the Exxon Valdez, the Cosco Busan, spill of national significant exercises, and through the implementation of the Oil Pollution Act of 1990, the response community galvanized their efforts under a common framework provided by the National Contingency Plan.

This framework, developed over the last two decades, enables us to respond to these catastrophes in a way that leverages the strengths of private industry under the leadership of a Federal on-scene coordinator. In accordance with the Oil Pollution Act of 1990,

we integrate the best of Federal, State, and local resources alongside the best and brightest of industry, academia, and the public in a unity of effort to protect our natural resources, livelihoods, and the security of the Nation.

From the President down, the Federal Government has taken an “all hands on deck” approach from the moment the explosion occurred, including the designation as a “spill of national significance,” with Admiral Thad Allen as the national incident commander.

From the start, our objectives have remained constant and clear: Stop the leak, fight the spill offshore, protect environmentally sensitive areas, and mitigate the effects on the environment, the economy, and the local communities.

Despite several aggressive measures, including the top hat and the riser insertion tube, engineers have been unable to stop the flow of oil. Today, we eagerly await the outcome of the top kill. We continue to monitor the progress in operation, which is expected to take 3 to 4 days.

In parallel, BP is drilling relief wells from two additional rigs. I meet personally with BP’s chief of operations officer, and I know their drilling contractors are working around the clock to secure the source of the oil.

While we are working permanently to secure the leak, we are attacking the spill as far offshore as possible. As the oil moves from one large slick to multiple ribbons of oil, we continue to deploy traditional removal methods. These include in situ burning, skimming, and pre-approved surface dispersants.

The magnitude of this spill has required us to look at nontraditional mitigation strategies. Subsurface dispersants and satellite imagery are just a few of the innovative technologies responders are using offshore. Near shore, almost 2 million feet of hard boom has been deployed, according to environmentally and economically sensitive areas, as outlined in local area contingency plans. This includes different types of booms and other nonconventional barriers methods, including National Guard deployment of Hesco barriers in Mississippi and sandbags in Louisiana.

As oil reaches the shoreline, we will continue to be aggressive in monitoring BP’s contractors and launching coordinated Federal and State actions. We require BP to obtain and deploy whatever resources are necessary, including new technologies, to ensure we are doing everything we can to protect the shoreline environmental sensitive areas in the Gulf region.

Mitigating the effects of this spill extend beyond environmental impacts and include damages to surrounding communities who depend so heavily on the Gulf of Mexico for their livelihood. The fishermen and small business owners are anxious to do whatever they can. Recognizing the desire of so many to help and support the local economies, the unified command has established a volunteer and vessel of opportunity program to maximize the opportunities available to the local communities to support response and cleanup operations.

Although the incident remains under investigation by a joint Minerals Management Service and Coast Guard Marine Board of Investigation, it may be months before we fully understand what

caused the explosion. However, the spill has heightened the need for building resiliency into our Nation's critical infrastructure so we are better prepared to respond to system failures and prevent spills of national significance from occurring in the future.

Our response to this historic spill is far from over, but I want to reassure you, the entire responsive community is fully committed and will continue to aggressively pursue all available options to mitigate the environmental and economic impacts of the spill.

Thank you for the opportunity to testify today.

[The prepared statement of Admiral Watson follows:]



U. S. Department of  
Homeland Security  
  
United States  
Coast Guard



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**TESTIMONY OF  
REAR ADMIRAL JAMES WATSON  
DEPUTY, UNIFIED AREA COMMAND**

**ON THE  
DEEPWATER HORIZON FIRE AND MC 252 OIL SPILL**

**BEFORE THE  
HOUSE ENERGY AND COMMERCE  
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT  
MAY 27, 2010**

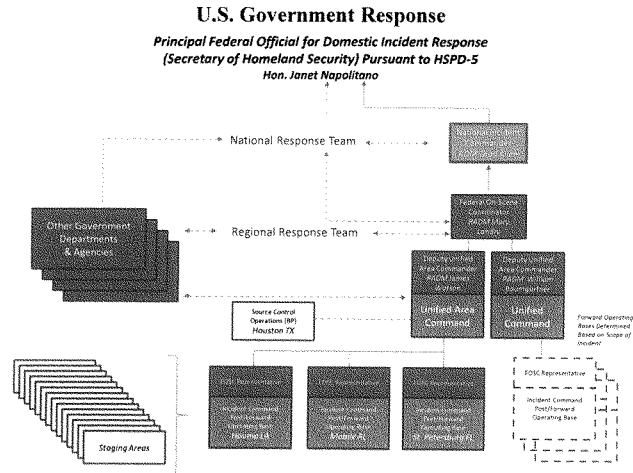
Good morning Chairman Markey and distinguished members of the committee. I am grateful for the opportunity to testify before this committee on the subject of the BP Deepwater Horizon oil spill currently ongoing in the Gulf of Mexico.

On the evening of April 20, 2010, the Transocean-owned, BP-chartered, Marshall Islands-flagged Mobile Offshore Drilling Unit (MODU) DEEPWATER HORIZON, located approximately 72 miles Southeast of Venice, Louisiana, reported an explosion and fire onboard. This began as a Search and Rescue (SAR) mission—within the first few hours, 115 of the 126 crewmembers were safely recovered; SAR activities continued through April 23<sup>rd</sup>, though the other 11 crewmembers remain missing.

Concurrent with the SAR effort, the response to extinguishing the fire and mitigating the impacts of the approximate 700,000 gallons of diesel fuel onboard began almost immediately. In accordance with the operator's Minerals Management Service (MMS)-approved Response Plan, oil spill response resources, including Oil Spill Response Vessels (OSRVs), were dispatched to the scene. After two days of fighting the fire, the MODU sank into approximately 5,000 feet of water on April 22<sup>nd</sup>. On April 23<sup>rd</sup>, remotely operated vehicles (ROVs) located the MODU on the seafloor, and, on April 24<sup>th</sup>, BP found the first two leaks in the riser pipe and alerted the federal government. ROVs continue to monitor the flow of oil.



As the event unfolded, a robust Incident Command System (ICS) response organization was stood up in accordance with the National Response Framework (NRF) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). ICS is utilized to provide a common method for developing and implementing tactical plans to efficiently and effectively manage the response to oil spills. The ICS organization for this response includes Incident Command Posts and Unified Commands at the local level, and a Unified Area Command at the regional level. It is comprised of representatives from the Coast Guard (Federal On-Scene Coordinator (FOSC)), other federal, state, and local agencies, as well as BP as a Responsible Party.



The federal government has addressed the Gulf Oil Spill with an all-hands-on deck approach from the moment the explosion occurred. During the night of April 20<sup>th</sup>—the date of the explosion—a command center was set up on the Gulf Coast to address the potential environmental impact of the event and to coordinate with all state and local governments. After the MODU sank on the 22<sup>nd</sup>, the National Response Team (NRT), led by the Secretary of Homeland Security and comprised of 16 Federal agencies including the Coast Guard, other DHS offices, the Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), Department of Interior (DOI), as well as Regional Response Teams (RRT), were activated.

On April 29, Secretary Napolitano declared the event a Spill of National Significance (SONS), which enhanced operational and policy coordination at the national level and concurrently allowed Admiral Allen's appointment as the National Incident Commander (NIC) for the Administration's continued, coordinated response. The NIC's role is to coordinate strategic communications, national policy, and resource support, and to facilitate collaboration with key parts of the federal, state and local government.

The NIC staff is comprised of subject matter experts from across the federal government, allowing for immediate interagency collaboration, approval and coordination. While the FOSC maintains authorities for response operations as directed in the National Contingency Plan, the NIC's primary focus is providing national-level support to the operational response. This means providing the Unified Command with everything that they need – from resources to policy decisions – to sustain their efforts to secure the source and mitigate the impact. This will be a sustained effort that will continue until the discharges are permanently stopped and the effects of the spill are mitigated to the greatest extent possible. Beyond securing the source of the spill, the Unified Command is committed to minimizing the economic and social impacts to the affected communities and the nation.

## UNIFIED RECOVERY EFFORTS

The Unified Command continues to attack the spill offshore. As of May 13, 2010, over 5 million gallons of oily water have been successfully recovered using mechanical surface cleaning methods. Further, approximately over 704,000 of surface dispersants have been applied to break up the slick, and controlled burns have been used as weather conditions have allowed. In addition to the ongoing offshore oil recovery operations, significant containment and exclusion booms have been deployed and staged strategically throughout the Gulf region. These booms are used to protect sensitive areas including: environmental and cultural resources, and critical infrastructure, as identified in the applicable Area Contingency Plans (ACPs). To date, more than a million feet of boom have been positioned to protect environmentally sensitive areas. Fourteen staging areas have been established across the Gulf Coast states and three regional command centers. The Secretary of Defense approved the requests of the Governors of Alabama (up to 3,000), Florida (up to 2,500), Louisiana (up to 6,000), and Mississippi (up to 6,000) to use their National Guard forces in Title 32, U.S. Code, status to help in the response to the oil spill.



## VOLUNTEERISM AND COMMUNICATION WITH LOCAL COMMUNITIES

A critical aspect of response operations is active engagement and communication with the local communities. Several initiatives are underway to ensure regular communications with the local communities.

1. Active participation and engagement in town hall meetings across the region with industry and government involvement.
2. Daily phone calls with affected trade associations.
3. Coordination of public involvement through a volunteer registration hotline (1-866-448-5816), alternative technology, products and services e-mail ([horizonsupport@aol.com](mailto:horizonsupport@aol.com)), and response and safety training scheduled and conducted in numerous locations.
4. More than 7,100 inquiries received online via the response website ([www.deepwaterhorizonresponse.com](http://www.deepwaterhorizonresponse.com)) with more than 6,121 inquiries completed, with 4-hour average time of response.
5. Over 568,000 page hits on response website.
6. Over 110 documents created/posted to response website for public consumption.
7. News, photo/video releases, advisories to more than 5,000 media/governmental/private contacts.

8. Full utilization of social media including Facebook, YouTube, Twitter and Flickr.
9. Establishment of Local Government hotlines in Houma, LA (985-493-7835), Mobile, AL (251-445-8968), Robert, LA (985-902-5253).

#### **MODU REGULATORY COMPLIANCE REQUIREMENTS**

43 U.S.C. § 1331, *et seq.* mandates that MODUs documented under the laws of a foreign nation, such as the DEEPWATER HORIZON, be examined by the Coast Guard. These MODUs are required to obtain a U.S. Coast Guard Certificate of Compliance (COC) prior to operating on the U.S. Outer Continental Shelf (OCS).

In order for the Coast Guard to issue a COC, one of three conditions must be met:

1. The MODU must be constructed to meet the design and equipment standards of 46 CFR part 108.
2. The MODU must be constructed to meet the design and equipment standards of the documenting nation (flag state) if the standards provide a level of safety generally equivalent to or greater than that provided under 46 CFR part 108.
3. The MODU must be constructed to meet the design and equipment standards for MODUs contained in the International Maritime Organization Code for the Construction and Equipment of MODUs.

The DEEPWATER HORIZON had a valid COC at the time of the incident, which was renewed July 29, 2009 with no deficiencies noted. The COC was issued based on compliance with number three, stated above. COCs are valid for a period of two years.

In addition to Coast Guard safety and design standards, MMS and the Occupational Safety and Health Administration (OSHA) also have safety requirements for MODUs. MMS governs safety and health regulations in regard to drilling and production operations in accordance 30 CFR part 250, and OSHA maintains responsibility for certain hazardous working conditions not covered by either the Coast Guard or MMS, as per 29 U.S.C. § 653 (a) and (b)(1).

#### **COAST GUARD / MMS JOINT INVESTIGATION RESPONSIBILITIES**

On April 27<sup>th</sup>, Secretary Napolitano and Secretary of the Interior Ken Salazar signed the order that outlined the joint Coast Guard-MMS investigation into the Deepwater Horizon incident.

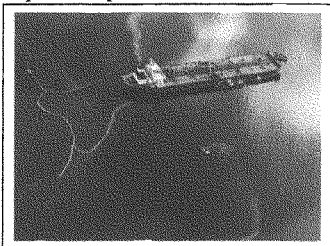
Information gathering began immediately after the explosion—investigators from both agencies launched a preliminary investigation that included evidence collection, interviews, witness statements from surviving crew members, and completion of chemical tests of the crew. The aim of this investigation is to gain an understanding of the causal factors involved in the explosion, fire, sinking and tragic loss of 11 crewmembers.

The joint investigation will include public hearings, which have already begun in Kenner, LA. The formal joint investigation team consists of equal representation of Coast Guard and MMS members. The Coast Guard has also provided subject matter experts and support staff to assist in the investigation.

## LESSONS LEARNED FROM PAST RESPONSES

The Coast Guard has been combating oil and hazardous materials spills for many years; in particular, the 1989 major oil spill from the EXXON VALDEZ yielded comprehensive spill preparedness and response responsibilities.

In the 20 years since the EXXON VALDEZ, the Coast Guard has diligently addressed the Nation's mandates and needs for better spill response and coordination. For example, a SONS Exercise is held every three years. In 2002, the SONS Exercise was held in New Orleans to deal with the implications of a wellhead loss in the Gulf of Mexico. In that exercise, the SONS team created a vertically integrated organization to link local response requirements to a RRT. The requirements of the RRT are then passed to the NRT in Washington, D.C, thereby integrating the spill management and decision processes across the federal government. The response protocols used in the current response are a direct result of past lessons learned from real world events and exercises including SONS.



Although the EXXON VALDEZ spill shaped many of the preparedness and response requirements and legislation followed to this day, other significant events since 1989 have generated additional lessons learned that have shaped our response strategies. For example, the M/V COSCO BUSAN discharged over 53,000 gallons of fuel oil into San Francisco Bay after colliding with the San Francisco-Oakland Bay Bridge in heavy fog. Through the recovery of over 40 percent of the spilled product, the Unified Command recognized improvements were needed in some areas. As a result, new guidance and policy was developed to better utilize volunteers in future responses. Additionally, standard operating procedures for emergency notifications were improved to ensure better vertical communications between the federal responders and local governments. Furthermore, steps were taken to pre-identify incident command posts (ICPs) and improve booming strategies for environmentally sensitive areas.

Most recently, the Coast Guard led a SONS exercise in March, 2010. Nearly 600 people from over 37 agencies participated in the exercise. This exercise scenario was based on a catastrophic oil spill resulting from a collision between a loaded oil tanker and a car carrier off the coast of Portland, Maine. The exercise involved response preparedness activities in Portland, ME; Boston, MA; Portsmouth, NH; Portsmouth, VA; and Washington, DC. The response to the SONS scenario involved the implementation of oil spill response plans, and response organizational elements including two Unified Commands, a Unified Area Command, and the NIC in accordance with the National Contingency Plan and national Response Framework. The exercise focused on three national-level strategic objectives:

1. Implement response organizations in applicable oil spill response plans
2. Test the organization's ability to address multi-regional coordination issues using planned response organizations
3. Communicate with the public and stakeholders outside the response organization using applicable organizational components

The SONS 2010 exercise was considered a success, highlighting the maturity of the inter-agency and private oil spill response capabilities and the importance of national-level interactions to ensure optimal information flow and situational awareness. The timely planning and execution of this national-level exercise have paid huge dividends in the response to this potentially catastrophic oil spill in the Gulf of Mexico.

#### **ROLE OF THE OIL SPILL LIABILITY TRUST FUND**

The Oil Spill Liability Trust Fund (OSLTF), established in the Treasury, is available to pay the expenses of federal response to oil pollution under the Federal Water Pollution Control Act (FWPCA)(33 U.S.C. § 1321(c)) and to compensate claims for oil removal costs and certain damages caused by oil pollution as authorized by the Oil Pollution Act of 1990 (OPA) (33 U.S.C. § 2701 *et seq.*). These OSLTF uses will be recovered from responsible parties liable under OPA when there is a discharge of oil to navigable waters, adjoining shorelines or the Exclusive Economic Zone (EEZ).

The OSLTF is established under Revenue Code section 9509 (26 USC §9509), which also describes the authorized revenue streams and certain broad limits on its use. The principal revenue stream is an 8 cent per barrel tax on oil produced or entered into the United States (see the tax provision at 26 U.S.C. § 4611). The barrel tax increases to 9 cents for one year beginning on January 1, 2017. The tax expires at the end of 2017. Other revenue streams include oil pollution-related penalties under 33 U.S.C. § 1319 and § 1321, interest earned through Treasury investments, and recoveries from liable responsible parties under OPA. The current OSLTF balance is approximately \$1.6 billion. There is no cap on the fund balance but there are limits on its use per oil pollution incident. The maximum amount that may be paid from the OSLTF for any one incident is \$1 billion. Of that amount, no more than \$500 million may be paid for natural resource damages. 26 U.S.C. § 9509(c)(2).

OPA further provides that the OSLTF is available to the President for certain purposes (33 U.S.C. § 2712(a)). These include:

Payment of **federal removal costs** consistent with the NCP. This use is subject to further appropriation, except the President may make available up to \$50 million annually to carry out 33 U.S.C. § 1321(c) (federal response authority) and to initiate the assessment of natural resource damages. This so-called “emergency fund” amount is available until expended. If funding in the emergency fund is deemed insufficient to fund federal response efforts, an additional \$100 million may be advanced, one time, from the OSLTF subject to notification of Congress no later than 30 days after the advance. See 33 U.S.C. § 2752(b). Additional amounts from the OSLTF for Federal removal are subject to further appropriation.

Payment of **claims for uncompensated removal costs and damages**. Payments are not subject to further appropriation from the OSLTF. 33 U.S.C. § 2752(b).

Payment of federal administrative, operating and personnel costs to implement and enforce the broad range of oil pollution prevention, response and compensation provisions addressed by the OPA. This use is subject to further appropriation to various responsible federal agencies.

#### National Pollution Funds Center (NPFC) Funding and Cost Recovery

The NPFC is a Coast Guard unit that manages use of the emergency fund for federal removal and trustee costs to initiate natural resource damage assessment. The NPFC also pays qualifying claims against the OSLTF that are not compensated by the responsible party. Damages include real and personal property damages, natural resource damages, loss of subsistence use of natural resources, lost profits and earnings of businesses and individuals, lost government revenues, and net costs of increased or additional public services that may be recovered by a State or political subdivision of a state.

In a typical scenario, the FOSC, Coast Guard or EPA accesses the emergency fund to carry out 33 U.S.C. § 1321(c), i.e., to remove an oil discharge or prevent or mitigate a substantial threat of discharge of oil to navigable waters, the adjoining shoreline or the EEZ. Costs are documented and provided to NPFC for reconciliation and eventual cost recovery against liable responsible parties. Federal trustees may request funds to initiate an assessment of natural resource damages and the NPFC will provide those funds from the emergency fund as well.

OPA provides that all claims for removal costs or damages shall be presented first to the responsible party. Any person or government may be a claimant. If the responsible party denies liability for the claim, or the claim is not settled within 90 days after it is presented, a claimant may elect to commence an action in court against the responsible party or to present the claim to the NPFC for payment from the OSLTF. OPA provides an express exception to this order of presentment in respect to State removal cost claims. Such claims are not required to be presented first to the responsible party and may be presented direct to the NPFC for payment from the OSLTF. These and other general claims provisions are delineated in 33 U.S.C. § 2713 and the implementing regulations for claims against the OSLTF in 33 CFR Part 136. NPFC maintains information to assist claimants on its website at [www.uscg.mil/npfc](http://www.uscg.mil/npfc).

NPFC pursues cost recovery for all OSLTF expenses for removal costs and damages against liable responsible parties pursuant to federal claims collection law including the Debt Collection Act, implementing regulations at 31 CFR parts 901-904 and DHS regulations in 6 CFR part 11.

Aggressive collection efforts are consistent with the "polluter pays" public policy underlying the OPA. Nevertheless, the OSLTF is intended to pay even when a responsible party does not pay.

#### OSLTF and the Deepwater Horizon

On May 12<sup>th</sup>, the Administration proposed a legislative package that will: enable the Deepwater Horizon Oil Spill response to continue expeditiously; speed assistance to people affected by this spill; and strengthen and update the oil spill liability system to better address catastrophic events. The bill would permit the Coast Guard to obtain one or more advances -- up to \$100 million each -- from the Principal Fund within the Oil Spill Liability Trust Fund to underwrite federal response activities taken in connection with the discharge of oil that began in 2010 in connection with the explosion on, and sinking of, the mobile offshore drilling unit Deepwater Horizon. To deal more generally with the harms created by oil spills as well as to toughen and update these laws, the bill would, for any single incident, raise the statutory expenditure limitation for the Oil Spill Liability Trust Fund from \$1 billion to \$1.5 billion and the cap on natural resource damage assessments and claims from \$500 million to \$750 million.

In order to help those impacted by the oil spill get claims and benefits quickly, the legislative package proposes Workforce Investment Act provisions which would assist states in providing one-stop services for those affected by the oil spill, including filing claims with BP, filing unemployment insurance/Oil Spill Unemployment assistance claims, accessing job placement, training and workforce services, accessing SNAP, child care, or other social service benefits, and applying for SBA Disaster Loans.

The emergency fund has been accessed by the FOSC for \$68 million as of May 23, 2010. BP, a responsible party, is conducting and paying for most response activities. The Coast Guard requested and received an advance of \$100 million from the OSLTF Principal Fund to the emergency fund as authorized by 33 U.S.C. § 2752(b), because the balance remaining in the emergency fund was not adequate to fund anticipated federal removal costs. BP and Transocean have been notified of their responsibility to advertise to the public the process by which claims may be presented. As of May 24<sup>th</sup>, 23,960 claims have been opened with BP, and nearly \$28 million has been disbursed; though Transocean has also already been designated as a responsible party, all claims are being processed centrally through BP.

#### **CONCLUSION**

Through the National Incident Command, we are ensuring all capabilities and resources—government, private, and commercial—are being leveraged to protect the environment and facilitate a rapid, robust cleanup effort. Every effort is being made to secure the source of the oil, remove the oil offshore, protect the coastline, include and inform the local communities in support of response operations, and mitigate any impacts of the discharge.

Thank you for the opportunity to testify today. I look forward to your questions.



Mr. MARKEY. Thank you, Admiral Watson, very much.

The chair will now recognize himself for a round of questions.

Deputy Secretary Hayes and Admiral Watson, this is BP's oil spill. BP hired Transocean to drill the well. BP hired Halliburton to cement the wellbore. BP owns the equipment necessary to stop the oil leak and has sole responsibility to stop the leak and pay for the cleanup cost. But BP gave deflated estimates about the flow rate, how much oil was actually going out into the ocean on a daily basis, couldn't provide a live feed of its efforts to the public for over a month after the explosion, and has not yet stopped the leak.

What oversight authorities of the Federal Government have been engaged to ensure BP gets the job done?

Admiral Watson.

Admiral WATSON. Sir, as soon as the oil spill response started, we have had a designated Federal on-scene coordinator who is responsible for that oversight. BP was given a letter that made that very clear, and the organization was established. All of the activities involving the response have been under the oversight and direction of the Federal on-scene coordinator.

As the incident grew larger and larger, we expanded that organization from a local incident command to an area command, and finally to a national incident command with the commandant of the Coast Guard, Admiral Thad Allen, in charge.

Mr. MARKEY. Thank you.

Administrator Jackson and Rear Admiral Watson, yesterday the Coast Guard ordered all ships participating in the BP oil spill cleanup to cease operations after crew members on three boats reported health problems. Since the start of this spill, EPA has been stating that the oil spewing under the sea is harmful to human and animal health.

Such illness is nothing new. Following the Exxon Valdez spill in 1989, Exxon reported 6,722 cases of upper respiratory infection from workers participating in the cleanup. Yet, BP spokesman Graham McEwen said this past Tuesday that he was unaware of any health complaints amongst cleanup workers. And fishermen working on cleanup are saying they weren't provided with protective equipment.

Did BP consult with the EPA or the Coast Guard on the health effects of deploying volunteers?

Admiral WATSON. We have at each of our incident command posts and at the area a safety officer. And our plans, our daily plans are updated according to the changing conditions of which these workers are exposed.

One of our highest concerns has been for the workers actually over the well, which caused the explosion in the first place, from the volatile organic compounds. As we hire contractors, we ensure that they are in compliance with the OSHA standards for working in these conditions, and volunteers are given specific training and equipment for the conditions that they would be volunteering to participate in.

For the fishing vessels, there is one set of training requirements; for the shore-side people, there is another. And then there is the wildlife people.

Mr. MARKEY. Do you think that these reported symptoms experienced by people involved in the cleanup efforts could be a result of exposure to the chemical dispersants?

Admiral WATSON. Sir, I can't comment on that specifically. But I know that the unified command is responding to those and making changes when we determine what it actually is that is being reported.

Mr. MARKEY. How is the EPA going to evaluate the long-term public health concerns associated with the use of dispersants, including the ingestion of contaminated seafood?

Ms. JACKSON. Chairman, we will first rely on data. That data is collected now. Primarily along the shoreline, air data is being collected along the shoreline in conjunction with the States, and also with two roving labs. We call them our TAGA vehicles, and also by the ASPECT aircraft, which is able to take air samples, especially during surface burning operations.

EPA is monitoring for particulate matter, volatile organic compounds, specifically compounds that would tend to cause odor from oil, BTX, benzene toluene, xylene. And we have added those components that are most volatile in the dispersant. We are just getting that data in. We haven't seen any dispersant chemicals, but we have seen elevated levels of some of those volatile organic compounds. We have also seen occasionally elevated levels of hydrogen sulfites, which we are monitoring for.

There is more and more data added every day, and I think it is EPA's job to assess both any short-term impacts—we haven't seen numbers that give us concern. We did have one volatile spike in the last few days and a hydrogen sulfite spike at one location—and then interpret for the people of the Gulf Coast what that means.

Right now, if you go on our Web site, it says that what you smell probably can make you nauseous, give you a headache, irritate you. So the first thing to do is if you are not participating in the cleanup or response is to remove yourself, because some people are quite susceptible to that. When I was there, it didn't bother me, but I am notorious for not being able to smell.

If you are a worker, then we refer—whether we are getting those complaints from the workers themselves or NGOs—those complaints to OSHA, which is part of the unified command, because worker protection and safety is their responsibility. We are not doing as much monitoring out over the wellhead itself.

Mr. MARKEY. Thank you.

The chair recognizes the gentleman from Michigan, Mr. Upton.

Mr. UPTON. Thank you, Mr. Chairman.

I would like each of you to give me what your estimate is of your cost thus far to the agency and what you might think it will be for the foreseeable future. Obviously, a ballpark figure is sufficient.

Ms. JACKSON. I will go. To date, EPA has spent approximately \$6.7 million. Of that, we spent about \$5.2 million in the regions in reimbursable funds and approximately \$1.5 million in headquarters.

Mr. UPTON. And what do you anticipate for the next 30 to 60 days or so?

Ms. JACKSON. Double it. You know.

Mr. UPTON. Mr. Robinson?

Mr. ROBINSON. Thank you. NOAA has expended \$4.6 million on Deepwater to date. This includes \$2.9 million in reimbursable funds from the Oil Spill Liability Trust Fund and \$1.7 million in recurring activities. I don't have the benefit of an estimate of what those expenses might be within the next 30 days. We will make that calculation and get back to you.

Mr. UPTON. Mr. Hayes?

Mr. HAYES. Mr. Upton, our estimate to date is about \$8 million. That is fresh from a House Appropriations hearing this morning. About 60 percent of that we believe will be directly reimbursable under agreement with the Coast Guard from BP. Some of the balance of that will not be. So that is our estimate at this point. And like Dr. Robinson, we can try to project forward, but that is pretty speculative.

Mr. UPTON. Mr. Salt, you get the added importance, I guess, of if we go ahead with these permits that have been approved, you all may be doing some extensive work there as well. So what are your estimated costs?

Mr. SALT. Sir, I don't have a good answer to that. The Corps' work so far has been on providing certain technical analysis, particularly the hydrologic analysis, as Secretary Darcy testified, with respect to options managing the Mississippi River. And then with respect to our regulatory effort the bulk of our future efforts will be in the monitoring part of that. It is not expected that we would do any of the work. At this time, it is not expected that we would do any of the work with respect to those permits.

Mr. UPTON. Mr. Watson?

Admiral WATSON. My estimate is about \$19 million at this time.

I have to say, though, that one of the things that I am responsible for in my position as the deputy Federal on-scene coordinator is management of the ceiling of the emergency fund under the Oil Spill Liability Trust Fund. It is a portion of the overall trust fund that we use for responding to emergencies. And we provide funding to other Federal agencies, State agencies. We use that fund to hire contractors directly. It is not used for damage costs or claims.

That fund, when I was down there just a couple days ago, was up to \$85 million total. And that is—when you are in a Federal response, that is the number that you are managing. As opposed to—

Mr. UPTON. My clock is running here fast. I want to get in a couple more questions. So as you all look at your costs thus far and going ahead, I would imagine that all of you will be seeking full reimbursement from BP.

Is there any argument to that statement?

Good. All five are unanimous.

Ms. Jackson, you indicated that you have done rigorous testing, sharing the data, particularly of the subsurface disbursements. Did they work? Are they working? Is that the reason why it has been reduced from 70,000 gallons to 12,000 gallons, because they are working? Because, based on what I have seen, there is not a lot that is working.

So tell me how they are working if in fact you are reducing the flow by a considerable amount.

Ms. JACKSON. Thank you, Mr. Upton.

One of the reasons that BP first requested the ability to use the dispersants in the subseas, something that has never been done as far as we can tell, anywhere in the world, is that they claim they can use much less dispersant and still be much more effective. And that is exactly what we are seeing right now. They use about—of the amount I told you, the 12,000, they used 11,110 gallons in the subsurface; they used 1,029 at the surface. The day before that, they used 200 at the surface.

Mr. UPTON. 200,000 or 200 gallons?

Ms. JACKSON. 200 gallons. The Coast Guard would rather, at the surface, use surface burning whenever possible. Surface burning obviously depends on the wind, and of course skimming and other collection operations.

You asked about the monitoring that we do in the subsurface. There are three basic pieces of data that are reviewed every night by a team of Federal scientists. The first is particle size. The smaller particle size is a measure of dispersion, if you will. The second is dissolved oxygen. There has been lots of concern that there would be too little oxygen in the system. And when that happens, the system becomes hypoxic and creatures die, to put it mildly. And the third is a toxicity test, which is done on a critter called rotifer. And those tests were agreed to by a panel of scientists because we can get them back quickly. And right now, we are seeing usually above 90 percent survivability when we expose this creature to the oil dispersant water mixture. I think we have had one or two samples maybe in the high 80 percent survivability.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the chairman emeritus of the committee, Mr. Dingell.

Mr. DINGELL. Mr. Chairman, thank you.

This question for the witness from the Coast Guard and from the Army.

Louisiana has proposed building a chain of sand barriers along the Louisiana coast to prevent oil from the coastal wetlands. The plan has not yet been approved. Why, and when?

Admiral WATSON. There is a consideration that the Federal on-scene coordinator uses in a proposal like this, and it is primarily: How effective is it going to be? Is it the most effective thing in the tradeoffs?

Mr. DINGELL. By the time you decide that, I have a notion that the oil will be well into the wetlands. How long is it going to take to come to this decision?

Admiral WATSON. First of all, we have to get a reading from the Corps and the other agencies as to whether it is going to be more hazardous to the environment than it would be if you didn't do it. Then, secondly, we have to make a determination if it is going to be effective stopping the oil.

Mr. DINGELL. Now, which agency down there has responsibility for the environmental impact? It is the Department of the Interior, is it not?

Mr. HAYES. That is correct.

Mr. DINGELL. Now, you did not require the environmental impact for the particular—impact statement for the particular well that we are talking about in the spill. Is that correct?

Mr. HAYES. That is correct. There is a legal restraint.

Mr. DINGELL. Let me continue, please, because I only have a certain amount of time.

Why did you not have an environmental impact statement? Each drilling undertaking is different, and each part of that of the tract on which you had the general environmental impact statement is different, and the equipment is all different. Why was there not an environmental impact statement on that?

Mr. HAYES. The administration has asked the Congress to change the law under the Outer Continental Shelf Lands Act. The Department is required to process an exploration plan and permit within 30 days.

Mr. DINGELL. Let me ask you about 30 days; I want to hear about that later. But the environment, the National Environmental Policy Act is still in force. It requires you, wherever there is going to be a significant environmental impact, to file one of these environmental impact statements. Why was that not filed here?

Mr. HAYES. CEQ has a categorical exclusion for this activity that they—

Mr. DINGELL. Why did that do that?

Mr. HAYES. They did that in 1986. The chair has started to review that—

Mr. DINGELL. What year did they do it in?

Mr. HAYES. 1986.

Mr. DINGELL. OK. Now, explain to me, if you please, why I am hearing about the risks of drilling or failure to drill properly and I am not hearing anything about the steps that the agencies have taken to ensure that good drilling practices are followed?

Mr. HAYES. Congressman, the Minerals Management Service spends about \$30 million a year on an inspection program, has 66 full-time inspectors. We are doing a stem-to-stern evaluation, however, of whether that enforcement mechanism where they check against the prescriptive requirements and the regulations is adequate or not. And that is going to be an important outcome, I think, of the investigation that has started and the Presidential commission that has been established.

Mr. DINGELL. Now, you tell me that you are required to come to a decision within 30 days on these permits. Is that in the statute?

Mr. HAYES. It is in the statute.

Mr. DINGELL. Do you have any authority to waive or to extend that?

Mr. HAYES. No authority, unfortunately. It is a shell. And legal counsel, since this law was passed in 1978, have said there is no authority to extend it.

Mr. DINGELL. All right. Now, MMS has granted 27 categorical exemptions to oil and gas companies. Would you submit to the committee the list of the categorical exemptions that you have given and why those categorical exemptions have been given in each instance, please.

Mr. Chairman, I ask unanimous consent that the record stay open so that can be received.

Mr. MARKEY. Without objection, so ordered.

Mr. DINGELL. Now, I note that you have given categorical exemptions to a well at 4,000 feet deep. Here, you gave one at 5,000 feet.

And you now have one that I note is given to Anadarko Petroleum for a plan that will be for a drilling undertaking that will be more than 9,000 feet. Why are these given? And explain why they are a, quote, category of actions which do not individually and cumulatively have a significant effect on the human environment and for which, therefore, neither an environmental impact assessment nor an environmental impact statement is required.

And I am quoting from the actions of the agency. Please explain that.

Mr. HAYES. Congressman, I would have to look at those specific examples. They have been—those are preceded by two environmental impact statements, one in connection with a 5-year plan under which those leases were granted, and then a second environmental statement was prepared for each specific lease sale under the 5-year plan.

You raised a very important point, though. And Chairman Sutley and Secretary Salazar 10 days ago suggested a top-to-bottom review of the NEPA approach taken by the Minerals Management Service.

Mr. DINGELL. Can you make a bald statement that every action that was taken by the drillers in each of these cases conformed in full to the environmental impact statement and to the permit?

Mr. HAYES. I personally cannot.

Mr. DINGELL. Would you submit for the record a statement that you can or cannot; and, if so, why?

Mr. HAYES. Certainly.

Mr. DINGELL. Thank you. Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired.

The chair recognizes the ranking member of the full committee, the gentleman from Texas, Mr. Barton.

Mr. BARTON. Thank you, Chairman Markey.

The first thing I want to establish is chain of command.

Admiral Watson, when I was in Louisiana with Chairman Markey several weeks ago, the top Federal official on site was an admiral named Mary Landry. Is she still the top Federal official on site?

Admiral WATSON. Yes, sir.

Mr. BARTON. Who does she report to?

Admiral WATSON. She reports to Admiral Thad Allen.

Mr. BARTON. And who does he report to?

Admiral WATSON. He reports to Secretary Napolitano.

Mr. BARTON. And who does she report to?

Admiral WATSON. The President.

Mr. BARTON. So that is the chain of command?

Admiral WATSON. Yes, sir.

Mr. BARTON. The President, Napolitano, Admiral Allen, and the Admiral Landry?

Admiral WATSON. Yes, sir.

Mr. BARTON. Is there any private representative on site that doesn't have to report to Admiral Landry?

Admiral WATSON. There is a requirement under the Oil Pollution Act of 1990 that we have a unified command and that the Federal on-scene coordinator is the person with the 51 percent vote.

Now, we do have a unified command in which we have a State on-scene coordinator, so the States are well represented, as well as a coordinator from the responsible party.

Mr. BARTON. The point that I am trying to get across, the British Petroleum representatives, the Halliburton representatives, the Cameron representatives, the Transocean representatives, any other contractor that works for a private company, they have an independent chain of command through their companies, but they have to work with Admiral Landry or her designee; they cannot act independently. Is that not correct?

Admiral WATSON. That is correct. The COO of BP is in our command center. He is right next to Mary Landry.

Mr. BARTON. Now, I want to go to Administrator Jackson.

We have talked quite a bit, and you mentioned in your testimony the dispersant issue. And I want to say right off the front, that I think that is a judgment call, and I think EPA has made the right judgment. I think it is the right judgment to try to use these dispersants to try to keep the oil under water as opposed to letting it get on the top of the water where it would wash onshore and could foul up the beaches and the marshlands.

So I am not negative at all about the decision to use dispersants. And I understand some of your testimony about the qualitative differences on how much to use. I think the least you can use, the better. I am not second-guessing that.

My question is, as the administrator of EPA, has British Petroleum received approval before using dispersant? And have they ever used dispersants in a way that EPA specifically disapproved of?

Ms. JACKSON. The answer to your first question is they have been—they were approved, pre-approved through the Federal on-scene coordinator's regional response plan that use of dispersants at the surface, as long as it was on the EPA product schedule, was allowable for surface applications. So that is yes. I believe you said, were they approved? Yes, throughout the—by the FOSC ultimately, but in conjunction with the ROT.

They specifically requested approval to use it in the subsurface and received that, I believe it was, May 14. The date is in my testimony, my oral and written testimony.

And then you asked if at any time their application of dispersants has been in violation of an order. I would say the closest that we got to that was Sunday night when my concern was that we had already approved use of subsea dispersants. All the testing and science was showing that it was working, and yet the amount of spraying at the surface kept going up. And the conversation that I had with Admiral Landry, and then she brought in Mr.—I am sorry, I don't remember his name. His first name is David. I am sorry—was that we wanted to see that go down. Their initial response was that they didn't understand that. But they did come around. And we have seen the amounts go down, as I mentioned in my testimony.

Mr. BARTON. Again, there can be honest differences of opinion about just the fact that you use dispersant or not, about the qualitative differences. But in terms of the policy, they have gotten approval before beginning and they have—while they have had dif-

ferences of opinion, they have not continued to do something that EPA or the on-site Federal official Admiral Landry didn't approve of. That's a true statement.

Ms. JACKSON. It is. The one piece of color I add to that, sir, is just that we—at this point I do not feel like I have the science to say with certainty that they are using the least toxic dispersant out there. So we are getting that science. It will take time.

Mr. BARTON. I understand that.

Know my time has expired, Mr. Chairman.

I have two more questions. One is for the representatives of the Corps of Engineers.

I want to know why in God's name Louisiana hasn't gotten approval to begin to build these berms. They have been waiting for over a month. Why would you not assign responsibility to the Governor of Louisiana, and tell them to do what they can to protect their marshland?

Mr. SALT. Sir, we actually received the permit request on May 11. We quickly coordinated that request, went back to the State. They agreed that they needed to modify the request based on some issues that were developed. We took their modified request, and we have been working with that.

One of the main issues is the time it would take to do it. The State's request, you can think of it as 19 increments of berm. We just coordinated an analysis of how long it would take to construct the shortest, and it was 5 months. Part of the analysis then is, how much of this is it reasonable to permit under the emergency provisions? The Jacksonville district commander proffered that to the Governor.

Mr. BARTON. So basically you have sat on your bottom for a month, and nothing—and I think you got some permitted today. Isn't that correct? Six sections got permitted. And in the meantime, the oil is in the marshland. Even if it didn't work—

Mr. SALT. Sir, my math is 13 days. But, yes, in that process of trying to sort—I mean, the question really is, is it more harm than good to throw up a berm for over 100 miles along the coast?

Mr. BARTON. And so the Corps' judgment is it is more harm.

Mr. SALT. There is a part of that proposal that is beneficial. That is the part that it worked through with the State and others. I am not sure that—the State hasn't accepted the offer yet, but that was offered.

Mr. BARTON. If the Corps had given approval immediately, could not some of the oil that had gotten in, has been able to infiltrate into the marshland, would it not have been prevented from getting into the marshland?

Mr. SALT. Sir, I honestly don't think so. We are talking about large berms. And to achieve some of the benefits you are talking about, like I said, to complete the shortest of the berms, the Corps' estimate was 5 months.

Mr. BARTON. Well, maybe if Louisianans did it, it might not take 5 months.

Mr. SALT. Even if we accept those kinds of proficiencies, sir, I think—the Corps was trying and is trying and is committed to try—

Mr. BARTON. I encourage you to try to harder.



I thank the chair's discretion.

Mr. MARKEY. The gentleman's time has expired.

And, Mr. Hayes, we know that you have an important meeting. Obviously, because of your responsibilities, you have to go there right now. So we thank you for coming here today.

Mr. HAYES. Thank you, Mr. Chairman. I would be happy to respond to any further questions for the record.

Mr. STEARNS. Point of information, Mr. Chairman, is it possible that someone from MMS could be here as his replacement? Since we do have a hearing and we are in Congress, we would like to have somebody here; and many of us still want to ask him questions.

Mr. MARKEY. I don't know that there is anyone designated by the Secretary to replace Mr. Hayes.

Mr. HAYES. We do not have anyone else here.

Mr. STEARNS. Can he possibly wait for one series of questions?

Mr. MARKEY. Again, I know that they are part of the spill response team, and Mr. Hayes is responsible for it, and I just don't want our hearing to interfere with his ability to participate in the important decisions which are being made right now.

Mr. HAYES. Thank you, Mr. Chairman.

Mr. MARKEY. Thank you, Mr. Hayes.

The chair recognizes the gentlelady from California, Ms. Capps.

Mrs. CAPPS. Thank you, Mr. Chairman and thank each of our panelists. It has been a very arduous process, both down in the Gulf and here answering questions.

Workers and volunteers and local residents are at risk as we speak here for a host of negative health affects. Just yesterday, the unified command recalled fishing vessels working on the spill due to workers' experience of nausea, dizziness, headaches, and chest pain. Previous spills have shown that more serious health problems may arise over time.

Administrator Jackson, according to an L.A. Times interview with some fishermen working on the results of the spill yesterday—or the interview was yesterday—while they were told not to touch the oil in their training, they weren't provided with any protective equipment by BP. Instead, they wore leather boots, regular clothes on the boat to work the spill.

When asked what BP told them, the fishermen responded that they—meaning the BP officials—told us if we ran into oil it wasn't supposed to bother us.

Do you think that BP has done enough to protect the health of the oil spill responders in the Gulf Coast communities?

Ms. JACKSON. Based on that story, no, ma'am.

Mrs. CAPPS. Just for the record, I was at a hearing earlier today with the CEO of BP, and I asked the same question, and I didn't get any response. So it seems to me that, while BP does have some technical expertise and experience in drilling, when it comes to public and worker health there is no reason that we should assume that BP has the expertise, the willingness to use its resources or incentives to really address the issues that are involved here.

Now EPA is already taking steps to protect the health of workers in communities, as you mentioned in your opening remarks. You are collecting data, you are doing monitoring and surveillance, but

are there some other ways that EPA is communicating about health risks to the public?

Ms. JACKSON. The primary means that we use are for those who have Internet access we put up information to help communities. It is a right to know. A basic tenet of environmental protection is that people have the right to know. We do that in conjunction with our partners and with the command.

We also have put up a translation in Vietnamese. So that there is access to not everything but some information, particularly that related to human health.

We continue to get data. We have had a series of public meetings, and we have been fortunate enough to be joined with our partners. Often, the Coast Guard, NOAA, Department of Interior, Fish and Wildlife are there to answer questions.

Just as your particular issue we would normally refer that to OSHA. Dr. David Michaels I believe has been very adamant about the need for OSHA to stand up and be very available through the unified command for any questions related to work, specifically to worker health.

Mrs. CAPPS. Thank you.

I am assuming EPA is also translating—while you are translating literally to other languages, but as data is being collected, as this ongoing process occurs, you will use this. Do you use any other methods as well to keep the local communities and workers and volunteers apprised of new data as it comes along?

Ms. JACKSON. Oh, absolutely. We are trying everything we know to help the communities understand what we do. Just the other day when I was out there, we had NGOs who were particularly concerned about odor complaints ride along in our mobile lab so they can understand and tell us where they might want us to go to focus on information.

It is a continual process, and it is one that we do under the direction of the Coast Guard. They have been very supportive of any efforts EPA makes to bring in and inform the local community.

Of course, since I am from Louisiana at least and the Gulf Coast region for sure, that I think nothing could be more important.

Mrs. CAPPS. And, also, to follow up even more, you mentioned OSHA and you talked about collaboration with the Coast Guard. Are there other agencies as well that should be involving in some of these public health responses.

Ms. JACKSON. Certainly when it comes to seafood safety, it is the Food and Drug Administration, along with any partnership with NOAA, because NOAA is collecting so much data out there.

I believe either today or yesterday EPA was asked by NOAA to join some of their deep sea cruises. We generally don't do a lot of sampling out in the deep sea. That is NOAA's responsibility. But there is good cooperation there. And we are working very closely with our Federal partners to ensure that all data is getting up on the Web. EPA has a bit of experience in that regard as well.

Mrs. CAPPS. You know, earlier this week, this full Committee on Energy and Commerce, we held a markup for a bill that will provide necessary health care to 9/11 responders—if you can believe this many years after that—who continue to face negative health consequences when their heroic work after the Twin Towers fell.

Responders to this oil spill, including local shrimpers and fishermen and volunteers and community residents, shouldn't be choosing to save the life of the Gulf region, which they definitely want to participate in doing, while having the choice then to put their own health and lives at risk. And this time I hope we can, as I am encouraging to continue doing what you are doing and even expand it, all of these agencies here, that we don't find ourselves in the same position 10 years from now that we did before.

Ms. JACKSON. I thank you.

I just want to acknowledge the Coast Guard's very strong precautionary action yesterday when there was the first sign of complaint. It is very warm down there. That oil is light crude, sweet light crude. It does volatilize, and it can have effects on folks, even folks in the Gulf. We think we are pretty tough as it is. And so I could not emphasize more strongly, although it is out of my lane per se, that proper protective equipment, erring on the side of precaution is extremely important for anybody down there.

Mrs. CAPPS. I know that I have run out of time. If there were more time or maybe you can submit for the written record, Admiral Watson or any others that wish to submit some statements about this fact.

Admiral WATSON. Yes, ma'am. Thank you.

I just want to emphasize that safety is the first thing that we discuss at every one of our meetings; and, of course, we are reactive immediately if we find there is a concern. I have been in personal discussions with Dr. Michaels, and OSHA is a very much a part of our team.

Mrs. CAPPS. Thank you very much. I yield back.

Mr. MCNERNEY [presiding]. At this point, the chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Mr. Chairman, I think Mr. Stearns. The order we had when we started with the opening statements is when the gavel drops by seniority, and he was here when the gavel dropped.

Mr. MCNERNEY. The chair recognizes Mr. Stearns.

Mr. STEARNS. And I thank the gentleman, Mr. Shimkus.

Admiral Watson, recently, the press secretary for the President, Robert Gibbs, indicated, "There's nothing that we think can and should be done that isn't being done, nothing." He was pretty emphatic about that. And I guess the question for you is, in your present position, do you think absolutely everything is being done that possibly could be done to clean up this oil spill?

Admiral WATSON. Sir, I was sent down there to do everything that could be done. My assignment was to be—

Mr. STEARNS. Oh, I understand your assignment, Admiral.

Admiral WATSON. I really feel like I have done my duty.

Mr. STEARNS. Have you done everything possible that could be done to clean this oil spill, in your best opinion?

Admiral WATSON. Personally and from my perspective inside the organization, yes, sir.

Mr. STEARNS. Now, ABC ran a news story yesterday in which they interviewed a lot of the small fishermen. They say, we have boats. We are ready to go out and skim off the oil to help out. Why aren't all those unemployed fishermen—why aren't you using a lot of their boats to help out?

Admiral WATSON. Sir, I think we have over 500 fishing vessels. I think the number is closer to 600. They are——

Mr. STEARNS. They showed boats after boats on ABC, and they interviewed these individuals.

Admiral WATSON. Well, I just know that we have accepted vessels of opportunity from all the fishing vessel communities. We have given them the training, the equipment, and we have deployed them, and they are being used to recover.

Mr. STEARNS. Well, you heard Ranking Member Barton indicate that Governor Jindal has asked for approval to put these oil spill booms out and hasn't got it. And he has also got partial approval for building the berms. Why wasn't that done earlier if you think everything has been done that has been done? Why haven't you given the approval for the Governor on the oil spill booms?

Admiral WATSON. Sir, on the berms, that is a tactic that hasn't been used before. We need to know——

Mr. STEARNS. No, let's take the first one, the booms. He has been asking that for some time.

Admiral WATSON. Oh, booms. There is 1.8 million feet of booms out. We have put booms down to the maximum level of effort possible, and there is——

Mr. STEARNS. He has indicated in a press conference yesterday, the Federal Government—he wants them to approve millions of feet of boom, and he is waiting for their approval, and he hasn't got it. This is the Governor. So you are saying you have approved everything and you are not going to approve more?

Admiral WATSON. We are still flowing booms in as fast as we can into the State of Louisiana.

Mr. STEARNS. OK, well, I am just telling you what the Governor says.

Now it is also reported there are lots of countries who want to help out. They want to send their ships over here. They want to provide research, technical expertise, oil pumps, skimmers, wildlife treatment. All these countries have listed, and yet it doesn't appear to be—I mean, you have had Mexico, maybe one other country. Why haven't you accepted help and support and assistance from all these other countries? I think there were 15 countries that were cited.

Admiral WATSON. Yes, sir. I can't address each one of those, but we do have State Department in our organization, and we are using the presence of BP around the world to access those resources. We are flying Canadian aircraft. We are using booms from the Middle East and from Europe.

Mr. STEARNS. It was also reported that Holland has a ship and a mechanism to take up 80 percent of the oil by skimming it. Did you know about that?

Admiral WATSON. We do have——

Mr. STEARNS. Have you contacted Holland to see what the process is they have in place?

Admiral WATSON. We have a dedicated group of engineers that are working with proposals like that, sir. I can't speak to that specifically.

Mr. STEARNS. OK, it has been 5 weeks. It seems like from day 1 if you would had boats out there to take off the skim and oil

pumps and skimmers, this expertise would have delayed hitting the shores of Louisiana. Don't you agree with that, that you should have had on day 1 somebody out there doing that?

Admiral WATSON. Sir, we responded on day 1 with everything that we had. This equipment takes time to flow in, and these novel things need to be evaluated before—

Mr. STEARNS. Well, how about day 21? Day 21, you did nothing. There was no skimmer boats out there. There was nothing being done. And I don't see any foreign countries out there that you have approved coming in. And, you know, the Governor now has for 2 weeks been asking for you to give waivers. Why didn't you do it earlier for the oil spill booms?

Admiral WATSON. We have a total of 1,500 vessels, sir. I am not sure which ones you are referring to that we don't have working.

Mr. STEARNS. Well, the first couple weeks you weren't out skimming the oil at the site. You weren't trying to contain the oil. The oil was—I was out there. I saw it. I was on a Coast Guard aircraft. It was flowing everywhere. And you could see it come up. It was emulsified orange. Everywhere you looked, you saw it. And there was—nobody was skimming it up, nothing. This was about 3 weeks ago.

So for you to sit here and tell me, Admiral, that you have done everything possible and let this thing hit the Louisiana shore, you have to take some culpability here; and you have to stand up and say, we could have done more. You can't go with the administration that keeps saying, oh, yes, we have done everything possible. Because it is clear you haven't.

Mr. MCNERNEY. Thank you, Mr. Stearns.

At this point, the chair recognizes himself for 5 minutes.

First of all, I would like to ask if there are any known methods out there—maybe Mr. Salt can answer this or Administrator Jackson could answer this—that would be effective in protecting the marshes. Are building dirt walls effective or putting human hair booms? Is there anything out there that would be effective?

Mr. SALT. Sir, I believe we are trying everything we know to try.

Mr. MCNERNEY. Well, I mean, is there any method that is known that would be effective, whether or not you are using it, whether or not you are deploying it? Getting oil, to prevent oil from coming ashore, is there anything out there that can prevent that?

I know that the oil is dispersed in the water. It is not just on the surface. So it is a difficult problem. Is there any known technique or method that would be effective in this, in this situation?

Mr. SALT. Sir, beyond what is being tried right now, no, sir, I don't know anything more.

Mr. MCNERNEY. Ms. Jackson.

Ms. JACKSON. Sir, as we heard the Admiral say, we are using all the methods that are typically used. I have almost every day someone who e-mails me with an idea of some sort. There have been so many that there was a technical group put together under the leadership of the command to try to evaluate them. It is very, very difficult, sir, to do science on the fly right when you are in the middle of something of this magnitude and not do harm. One of the concerns is that in our rush to want to do something we want to make sure we are not making the bad situation worse in the long term.

Mr. MCNERNEY. Thank you.

Rear Admiral, looking in the mirror a little bit now, is there anything that the United States government could have done that would have been more effective, taking control of the administration of this, or any administrative or technical thing that we could have done that the United States government could have done that would have been more effective?

Admiral WATSON. My personal feeling is that once this manifests itself with all of that oil coming up onto the surface—we did have weather conditions that did provide—that did force us to retreat on occasion. I think that from what we could have done differently it could have been in the time since drilling has moved outward we could have changed our readiness and increased our planning factors for this kind of a spill. We have contingency plans. They are really based on worse-case scenarios that aren't as worse as this one is, and that would have potentially changed our resources that were available when the event occurred.

Mr. MCNERNEY. In your opinion, would it have been hurtful or more effective to take control of this from BP? In other words, my understanding is that BP is running the show with oversight of the Federal Government. Would it have been more effective for the Federal Government to take control and to give direction to the various players?

Admiral WATSON. Well, let me just explain the type of control that we have over BP.

First of all, they are required to have a contingency plan. They are required to have oil spill response contractors and other contractors to respond to the type of incident that they might have. And then when the incident occurs, they have to become a part of the organization. If we find that they are nonresponsive, then we would begin to give them more direct orders. But in this particular case we have been working this response as a unified command, and we found that the resources that BP has been able to bring have been valuable, and there have been no circumstances that I have observed where they have not complied with the plan of the day for the oil spill response.

Mr. MCNERNEY. Thank you.

I am going to yield my time back and recognize—is it your turn—the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. I am not trying to manage time, but I appreciate that.

Obviously, thank you all for coming. Again, we wouldn't wish this on anybody. This is what we have, and I know there is a lot of frustration. I think part of the frustration is we are the representatives of the people. I know the folks in Louisiana are frustrated. The whole country is really frustrated.

With new technology today, we see every “gee whiz dang” solution that can save this thing, from putting straw on the thing and soaking it up—that was one that went around last week. And, you know, Kevin Costner is going down there to get his little whirlybird thing down there to help. People want to help. They see all these things.

I think the other part of the frustration—you know, if I was Governor of Louisiana, I would just do it. I would just do it and suffer

the consequences. The court of public opinion he wins by trying to save his marshes. I wouldn't wait for the Federal Government. But I am not the Governor of Louisiana, so I guess I don't have to make that call.

Administrator Jackson, I said I would be very kind, and I am going to be. What is the name of dispersant that we are talking about?

Ms. JACKSON. COREXIT. There are two different formulations, COREXIT 9527A and 9500A.

Mr. SHIMKUS. Are they both being used, or is one over the other?

Ms. JACKSON. Yes, they both have been used. I think the only one that is currently being used is 9500A.

Mr. SHIMKUS. You mentioned some type of list. Can you explain for me that list? And the 9500, is that on that list?

Ms. JACKSON. 9500 is on the product schedule which is authorized and listed in the national contingency plan.

Mr. SHIMKUS. So this 9500 is what is being used. The only kind of different thing about this is there has been approval for it to be dispersed deep, right at the spill.

Ms. JACKSON. Yes, the novel application is this injection right as the spill was coming up. That stopped yesterday, actually, as they initiated the top kill operation. I don't think it is happening right now.

The other novel thing is the volume use. It is usually used over a shorter period of time. So there are certainly U.S. record volumes used here.

Mr. SHIMKUS. And so then on this—so it is usually dispersed on surface, and this is new. And so could part of this—I give credit to Chairman Markey. This whole debate of how much is being spilled is very important. I sat through people taking pictures and trying to do the flow diagrams, and I had some thermal fluids at my military school that I attended.

If we had a lower projection of what was being released and then this dispersant was being used volumetrically in proportion to what we thought it was, would that not make the case that that is why we have probably some more surface appearance versus, you know—could that have been a reason, you think?

Ms. JACKSON. I am not sure I understand the question.

Certainly when you use a dispersant as I understand it at the surface you have to set your nozzles to a certain rate of application. And one of the important things is making sure you are not wasting it, if you will, accidentally spraying it or having it drift over open water. It is not going to do any good. And one of the big lessons that we will learn, frankly, on the fly here with this subsea application is maybe we found a tool that could be used in future, God forbid, accidents.

Mr. SHIMKUS. Could be used positively.

Ms. JACKSON. Yes. If we continue to believe that this is a much more effective way to get at the problem, this means you can use less of the chemical. And we are seeing issues. Now the one thing that people are pointing out is that there is no data on the long-term fate of this material, this dispersed material, so we are going to—

Mr. SHIMKUS. So we don't know if it is biodegradable or stuff.

Ms. JACKSON. It is biodegradable.

Mr. SHIMKUS. Is there a time line for that?

Ms. JACKSON. There is a French study and some other work that has been done that says within a month it biodegrades. What is a little unusual is that is assuming surface application, and we are in 5,000 feet of water here.

Mr. SHIMKUS. And you mentioned France. I guess the French use this or other countries use of this, especially use the 9500 one. I mean, is that commonly used around the world?

Ms. JACKSON. Let me get the answer back to you on the record on that. There has been some back and forth about a British ban. The British don't use COREXIT in their rocky—in their shallower water, and they are testing it in deeper water.

Mr. SHIMKUS. Again, thank you for all you do, all hands on deck. We have got to get this solved. Hopefully, we were successful today. I yield back my time. Thank you, Mr. Chairman.

Mr. MCNERNEY. Thank you, Mr. Shimkus.

The chair recognizes the gentleman from Texas, Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman. I apologize for having to run in and out, but we also have other committees and issues. I appreciate our panel being here.

I represent a very urban district in Houston. We have the Houston ship channel, and so we wouldn't be there without the Coast Guard. And needing dispersant—just recently, we had two ships collide in the upper channel, and we had the booms, and nothing on comparison of what is going on now. So our experience is in much smaller spills, and we are literally finding out what we can do on these huge spills, and we never had one before.

In fact, a lot of the technology we have today—I was a State legislator in 1979 when the well exploded in the Bay of Campeche, and we saw oil on the Texas coast, and it was much more tragic than what we are seeing now. But, again, I don't want to see that or this or anything.

I appreciate the panel being here. I know the Department of Interior left, and I had some concern about the—and I know the President just announced the expansion or the 6 months on drilling in deep water or floating rigs; and there are a lot of Members, including on this committee, who have some concern about the shallow water which is a thousand foot or less. So I have some concern to make sure that can continue. Because, actually, we need the natural gas safely produced.

Let me talk about dispersants. Because, Madam Administrator, again, we are making history. We have never had to disperse this much, and we have never had the underwater plumes that are so deep, I guess. Because, again, a ship channel, even where it was at, it wasn't 45 foot. So it was very small compared to what we are experiencing.

Correct? It is—from what I understand, it biodegrades rapidly and does not bioaccumulate. And does it not include any known carcinogens or endocrine disrupters? Ms. Jackson, is that information that you can share with us?

Ms. JACKSON. There is testing that I have asked my scientists to do. It will take about a week to look specifically at endocrine disrupters.



Listen, it is a chemical, sir, so it has a toxicity to it. It is less toxic than oil, but it is—it has toxicity.

Mr. GREEN. I can understand your response to Congressman Shimkus. You see the planes flying over and, you know, it is kind of like trying to put out a forest fire. Once you put the dispersant out, it is going in open water as well as water that has the plume or the oil on the surface.

Are there any other alternatives other than COREXIT and the secondary one that can be used and what are the availability of alternatives other than that?

Ms. JACKSON. Sir, I believe there are 14 or 15 different dispersants listed on the national contingency plan product schedule. The way the area response plan reads, potentially any of them could have been used.

The concern became that, as this thing has become a longer-term release, whether or not the original decision to use COREXIT might not be looked at again, whether there was something less toxic out there. BP has not identified anything less toxic. My belief is that there is more science needed on that, and so we are going to do it.

Mr. GREEN. Our concern is the secondary, you know, but is that particular dispersant—has it improved the situation of the oil spill in the Gulf of Mexico?

Ms. JACKSON. Sir, it is a tough tradeoff, but I believe it has been a useful tool. Again, as I understand it from the Coast Guard, the FOSC would rather use burning and booming. Surface dispersant application is really her last choice, because it is inefficient.

The subsurface method certainly bears further study for potential options in the future. But I think we owe it to everyone—especially when I go down there and I talk to shrimpers and others, there is a lot of concern. And, right now, I can't give them all the answers they would like about whether or not this dispersant is in the water. So we are taking the samples. We have gotten some very, very limited water samples back; and so far we don't see any of the constituents from the dispersant in the water. But we will get another 60, 70 samples back in the next few days.

Mr. GREEN. Any other panelist on the dispersants?

Admiral WATSON. Congressman, I would just add dispersants have been in our inventory to respond to oil spills for a long time, 20 years. We have never used this much, but over those years I think we have found them effective, and they have been effective in this particular spill particularly.

Mr. GREEN. Thank you, Mr. Chairman.

Mr. MCNERNEY. Thank you, Mr. Green.

The votes have been called. There is about 12 minutes left, so I ask the remaining members to be mindful that there are three members that wish to speak.

At this point, the chair recognizes the gentleman from Texas.

Mr. BURGESS. Thank you, Mr. Chairman.

They will hold votes for us. This is important.

Administrator Jackson, oil, is it biodegradable?

Ms. JACKSON. Yes, sir, oil does biodegrade. It takes a while.

Mr. BURGESS. By what action does it do that? Does it oxidize, does sunlight change it, or do bacteria digest it?

Ms. JACKSON. Bacteria under aerobic conditions digests oil, sir.

Mr. BURGESS. What research has been undertaken by EPA to investigate the ability to use normal occurring bacteria to deal with an oil spill?

Ms. JACKSON. There are products listed on the national contingency plan schedule that are—I forget the name for them, but they are considered to be aids to biodegradation. That is different than dispersants. So there is some work authorized under the NCP for the EPA to evaluate and potentially list them as tools that can be used in response.

Mr. BURGESS. Exxon Valdez, some people felt that some of the mitigation efforts were actually as harmful or more harmful to the shoreline than was the oil itself. Given that information, has EPA been actively engaged in any research with any university or academic arrangement to try to develop these bacterial digesters?

Ms. JACKSON. Well, EPA wouldn't necessarily develop them. That is the innovation and ingenuity of the American people, sir. But EPA does have a lab. I believe we partner with Environment Canada up in Nova Scotia to look at—

Mr. BURGESS. How many of these are you evaluating?

Ms. JACKSON. Sir, I don't have an answer for you on what we are evaluating right this second.

What I mean to say, as part of our regulatory responsibilities, we would have to list these—

Mr. BURGESS. We have to go fast, because he has a quick gavel.

We have been very fortunate since Exxon Valdez—and Mr. Green mentioned the Gulf of Campeche. We have been very fortunate with oil spills, but we have got a lot of activity in the Gulf. We have driven our exploration out to deeper and deeper levels because we put so many areas off limits and yet we still demanded the energy. So, with that in mind, would it have not been prudent for the Environmental Protection Agency to have opened this up, request for proposals, to have people bring in their products and understand better how to deal with these problems up front.

Ms. JACKSON. Well, I think EPA relied on the oil industry and, in this case, specifically BP, who said that this would not happen. So that is why we are—

Mr. BURGESS. That is a real troubling aspect. I realize we lost our Department of Interior person, and we fired the MMS person, but this application is—I mean, it is a scandal in and of itself, and it is not just EPA but from a regulatory standpoint. Yes, shame on BP for turning this in.

A scenario for potential blowup of the well, which BP would expect to have the highest volume of liquid hydrocarbons, is not required for the operations proposed in this exploration plan. Well, that is bad judgment on BP's part, but the agency in charge of regulating and approving, it is really bad judgment on their part.

It seems like the EPA really should be more forward leaning in this regard. We do have a lot of activity going on in the Gulf of Mexico. The President did outline a plan for other areas to be open for exploration. We have been very lucky not to have spills, but spills are going to happen. Maybe not of this magnitude again in our lifetimes, but spills are going to happen. And it does seem to

be prudent that the EPA would take a forward-leaning role in this regard. The industry to be sure.

Now the injection of this dispersant at 5,000 feet under water, whose idea was that?

Ms. JACKSON. The request to do the injection came from BP.

And, sir, I just want to make sure—I know you know this, but many in the room may not realize that EPA does not review drilling applications. So I think you should get a response from them.

Mr. BURGESS. I would love it if they were here, but we were denied that opportunity, as you saw. They left before those of us on the lower ends of the dais got a chance to question, and they fired the other lady this morning. So that was unfortunate for us.

It just seems like after all this time—we have heard it in this committee, and we have heard it on television, on Rachel Maddow last night, the anxiety of people because we have not developed these contingencies. And maybe it is not EPA's place to do that, but it seems like EPA would have an ongoing, forward-looking strategy to deal with spills as they occur.

Let me ask you a question. Are we going to—is this going to eliminate deep water drilling in the Gulf? We have got a 6-month moratorium the President proposed today. Is deep water drilling in the Gulf over?

Ms. JACKSON. Oh, I don't have a crystal ball, sir.

Mr. BURGESS. Is this the Three Mile Island for deep water drilling in the Gulf? No deep water drilling, no nuclear, with hydrologic fracturing prohibitions that are being—we heard in this committee just yesterday, are we going to have anything left as far as producing energy for the American people that is of an American origin? Are we going to lock everything off?

Ms. JACKSON. Sir, I don't have a crystal ball, but I would refer to what the President said today, which is that until he can assure this can be done safely—first, let's remember 11 people died here and then that it can be done safely so that the States around the Gulf Coast, all of whom use it for varying purposes, including energy production, can feel certain that their interests are protected. I think he said he believes we need to have more time to make sure we understand exactly what happened here.

Mr. BURGESS. I don't disagree with that. If it is to be done safely, though, the applications must be followed to the letter.

Mr. MARKEY [presiding]. We have to go back to Mr. Scalise. I give you 3 minutes, Mr. Scalise.

Mr. SCALISE. Thank you, Mr. Chairman. I will try to get in as much as we can.

I know Mr. Barton talked about the chain of command. I have got a real interest in what that command chain of command really was. Because when I read the Oil Pollution Act it is very clear the President is the one who is directly responsible for ensuring effective and immediate removal of the discharge.

For too long, especially in the first few weeks but even still today, our local officials are still being sent through BP to get approval for various things that they are trying to do to protect the marsh and the coast. And so I will throw it out to whoever will answer this question—I guess the Coast Guard, since technically we were told the Coast Guard is in charge. Why is BP still in charge

of certain recovery operations? I can understand if they are dealing with the well, but why are they dealing with things that have nothing to do with the well?

Admiral WATSON. The Coast Guard Federal On-Scene Coordinator is responsible for the response, sir. And if there is any other activities that go on outside of that organization under the Federal On-Scene Coordinator, those things can be done; and the recourse for compensation for those is back to the responsible party. So I think we may be seeing some of those independent activities and when——

Mr. SCALISE. Well, let me be specific, because my time is short.

What about boom, the boats that are supposed to lay out boom? We were told our local fishermen were going to be hired to go do that. Many fishermen say they have not gotten any involvement in this.

This is what really irritated me. On Sunday in Jefferson Parish, the parish where I live, the Homeland Security chief told me that they actually went out and found 50 boats sitting idle at the dock that were contracted out to be laying boom. This is a day that oil is permeating into our marsh, and yet the boats that were employed to go put out boom were sitting idle at the dock. They went and commandeered a few of themselves to go put out the boom on their own. Why did you all let this happen?

Admiral WATSON. I can't explain that particular situation.

Mr. SCALISE. Who was in charge of that situation?

Admiral WATSON. We have a staging director.

Mr. SCALISE. Coast Guard? BP?

Admiral WATSON. This is a unified command, specifically——

Mr. SCALISE. Somebody is in charge. The President said today that he is in charge. Is the President in charge of boom?

Admiral WATSON. The President has put Admiral Allen in charge. Admiral Allen has Admiral Mary Landry report to him on a daily basis, twice daily.

Mr. SCALISE. So who signs the contract? I am trying to get an answer. I have got 30 seconds left. You are running my clock out.

I want to know who was in charge of putting out the boom and who let those boats sit idle at the dock on Sunday of this past week when you had oil coming into our marsh? Who did it? Can you tell me?

Admiral WATSON. I can't tell you the specific person——

Mr. SCALISE. Nobody wants to accept the responsibility for this. You know why we are frustrated right now? We are seeing the passing of the buck. Who did it? Who let that happen?

Admiral WATSON. The person on the ground who was responsible for that——

Mr. SCALISE. Who is going to be held accountable? Give me a name. Give me a name.

Admiral WATSON. I don't know.

Mr. SCALISE. Who can give me that?

Admiral WATSON. Well, I can get back to you, sir, if I know the location.

Mr. SCALISE. Inexcusable.

Let me move on then, because, again, that is inexcusable as an answer. That should not have happened. If the President was all hands on deck, that wouldn't have happened.

Let's talk about the Governor's plan, and I will ask the Corps of Engineers, Mr. Salt. We are being told that what was approved that the President announced today was only 2 percent of Governor's plan that he submitted. And in fact if it was done 2 weeks ago they would have laid out already 10 miles of protected barrier in front of the marsh that is now inundated with oil. Why didn't the President get everybody in a room or did he get everybody in a room and say we are rolling up our sleeves and we are not leaving until this problem is solved 2 weeks ago when this was submitted?

Mr. SALT. Sir, we wouldn't agree with those numbers.

Mr. SCALISE. Was everybody brought in the room by the President to say let's solve the problem or did they let 2 weeks go by where people went around—I have reports from the Corps and others where they are talking about doing an environmental study on this while the environment is being destroyed. That is ludicrous.

Mr. SALT. Sir, all of this is under emergency protocols. I would be happy to talk to you more after the hearing, if you would like.

Mr. SCALISE. I want answers on this. Because this is going on right now. We are not talking about let's study this after the fact. This is happening right now. Sunday, the boats were sitting at the dock while oil was coming into the marsh. There is no excuse for that.

I yield back.

Mr. MARKEY. The gentleman's time has expired, and the gentleman did have 5 minutes.

The gentlelady from Florida, I can just recognize her very briefly; and I apologize.

Ms. CASTOR. Thank you, Mr. Chairman.

Pictures of the oil from the BP disaster washing up in Louisiana are horrendous, but I am very concerned about the pollution that we cannot see. In Gulf waters, in places where marine life has been abundant, marine scientists are reporting today that they have detected a wide area of elevated levels of dissolved hydrocarbons throughout the water column. This follows on what the LSU pelican found a couple of weeks ago.

The highest concentrations are in the recesses of the Gulf of Mexico about 35 kilometers northeast of the disaster site south of Mobile, Alabama. Part of this area is known as the De Soto Canyon, which is a deep valley that cuts through the Continental Shelf south of the Florida panhandle. It is an upwelling of very nutrient-rich Gulf waters, where marine life is abundant and plentiful, our fisheries interact and produce enormous amounts of marine life. This pollution can't be seen from the surface, but it is a severe threat to habitat and marine life, nonetheless. It is going to get into the food web, our marine scientists say.

I am very concerned that NOAA doesn't have the tools to do the monitoring. I think what I have heard from scientists is over the past decade are data gathering and monitoring capabilities have been severely degraded, and I know NOAA is relying on a lot of the university and academic research institutions.

What are your plans to build back the capability to do this long-term data analysis that we are going to need? Do you understand the impact of this disaster? What is your plan for being able to monitor and survey the subsurface oils and impacts of the toxic nature of this disaster?

Mr. ROBINSON. Thank you, Ms. Castor.

As you know, we have been looking at both surface and subsurface oil. In fact, as you know, we are utilizing academic as well as our own resources in this effort, in particular the Weatherbird from the University of South Florida. We have seen from some of that data—from some of those monitoring data that indicate that part per million levels of oil are at the subsurface.

Mr. MARKEY. To the gentlelady—and I apologize to her. There is no time left on the roll call on the House floor, and I apologize to you, but—

Ms. CASTOR. Thank you, Mr. Chairman. I will look forward to visiting with NOAA and EPA.

Mr. MARKEY. And I do apologize to her for that.

I have members who sent a request that a statement from U.S. Travel Associates be included in the record.

Without objection, so ordered.

Mr. BURGESS. Mr. Chairman, I would also ask unanimous consent that letters from Steve Scalise and myself to Lieutenant General Robert Antwerpen and to Barack Obama regarding allowing the Governor of Louisiana to build the sand berms be included in the record.

I ask the record be held open for 5 days for written questions.

Mr. MARKEY. Without objection, it will be included in the record.

[The information appears at the conclusion of the hearing.]

Mr. MARKEY. We thank all of you for being here. We know that you are very busy and thank you for your service to our country and the work you are doing in this very difficult circumstance. Thank you.

[Whereupon, at 4:52 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

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**Draft – Work in Progress. Subject to Revision**

Washington Briefing  
Deepwater Horizon Interim Incident Investigation

24<sup>th</sup> May 2010

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24 May, 2010

- Investigation Overview
- Macondo Well Key Components & Critical Factors
- Critical Factors & Ongoing Work





## Investigation Overview

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- The Terms of Reference is focused on determining facts and causation
- Investigation team comprises ~ 70 internal and external personnel (inclusive of technical staff supported by legal, documentation and other support disciplines)
- Investigation based on:
  - Reports
  - Engineering drawings
  - Real-time data transmitted from the rig
  - Witness accounts (personnel both on the rig and others involved in operations and planning of Macondo Well)
  - Modeling & analysis
  - Aim to test equipment (cement sample, float collar, BOP)
- Investigation & analysis has access to limited physical evidence only
- Some key third party interviews and data have not yet been available

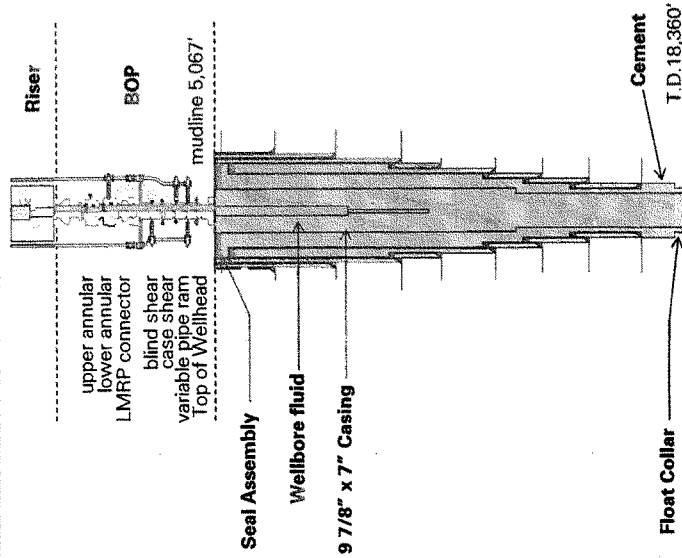
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## Macondo Well Diagram - Key Components & Critical Factors



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### Critical Factors

1. Loss of Integrity of the 9 7/8" x 7" casing created a path for hydrocarbon (HC) influx
2. Unrecognized well conditions
  - Influx unrecognized - Integrity test failed to identify communication with the reservoir
  - Operations allowed HC influx to enter and move up the well bore - well became capable of flowing
  - Response failed to control the well
3. BOP & Emergency Systems failed to isolate the HC source
4. Gas plume ignited

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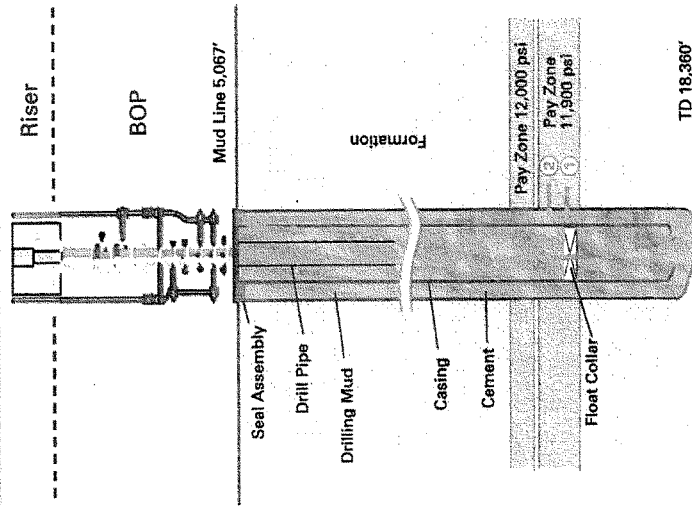
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## Critical Factor 1 - Loss of Integrity of Casing

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### Loss of Integrity of 9-7/8" x 7" Casing

- Cement failed to isolate the reservoir
- The float collar (1) or the seal assembly (2) leaked

#### On-going work & forward plans

- Review design and execution of the cement job
- Review design and installation of casing shoe track and seal assembly
- Laboratory testing of float collar
- Detailed well dynamic modeling to assess likely influx point

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## Critical Factor 2 – Unrecognized Well Conditions

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### Unrecognized Well Conditions

- Integrity test failed to identify communication with the reservoir
- Operations allowed HC influx to enter and move up the well bore – well became capable of flowing
- Rig crew response to well flow failed to control the well

### Ongoing work & forward plans

- Reconstruct timeline from available data and interviews to estimate when influx occurred and when it should have been recognized
- Try to ascertain why well flow conditions were not detected earlier
- Try to ascertain rig crew response to well flow conditions
- Review integrity testing procedure
- Transocean interviews when possible

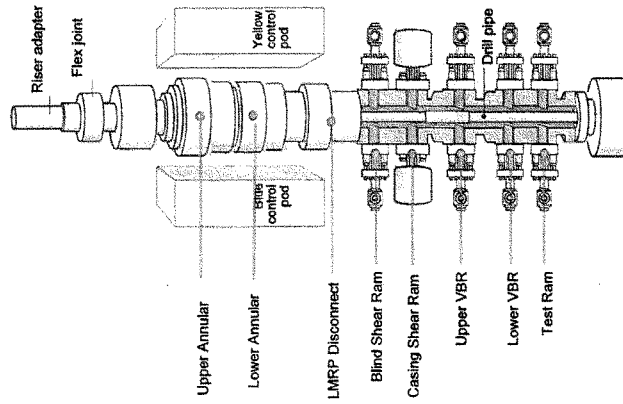
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## Critical Factor 3 – BOP Failed to Isolate Source

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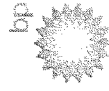


### BOP Failed to Isolate Source

- Action to activate the BOP once well condition was recognized failed to isolate the source
  - EDS failed to secure the well (when activated from bridge after explosion)
  - AMF/Dead-man failed to secure well
  - Subsequent ROV interventions failed to secure the well
- #### Ongoing work & forward plans
- Understand BOP testing history and performance of emergency systems, EDS, Auto shear, AMF (Deadman), ROV hot stab
  - Understanding of BOP modifications – could they have affected its functionality?
  - Assess leaks identified during ROV intervention and determine significance – could they have affected its functionality?
  - Evaluation of BOP maintenance history regards system completeness, OEM parts and 3<sup>rd</sup> party services
  - Inspect & test BOP once retrieved from sea floor

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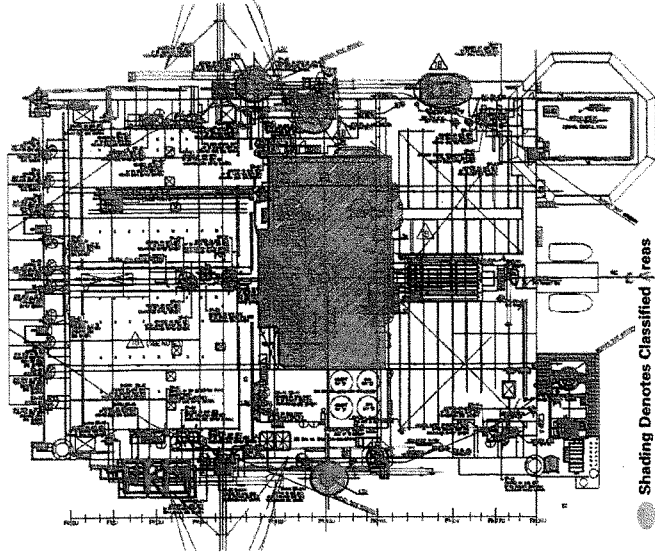


## Critical Factor 4 – Ignition of Hydrocarbons

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### Hazardous Area Classification - Main Deck



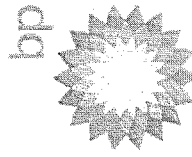
#### Ignition of Released Hydrocarbons

- Hydrocarbon gas detected by several gas detectors prior to explosion (two witness statements from bridge).
- Several potential scenarios of hydrocarbon release to atmosphere have been identified.
- Dynamic modeling estimates suggests that flammable gas mixtures could have reached non-electrically classified areas.

#### Ongoing work

- Fluid dynamic modeling being further developed in-line with most probable release scenarios.
  - Access to pit room / mud pumps
  - Access to derrick via degasser
  - Access to engine room
- Review of electrical area classification, fire and gas design and ventilation system design.

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## Deepwater Horizon Incident Timeline and Animation of Events

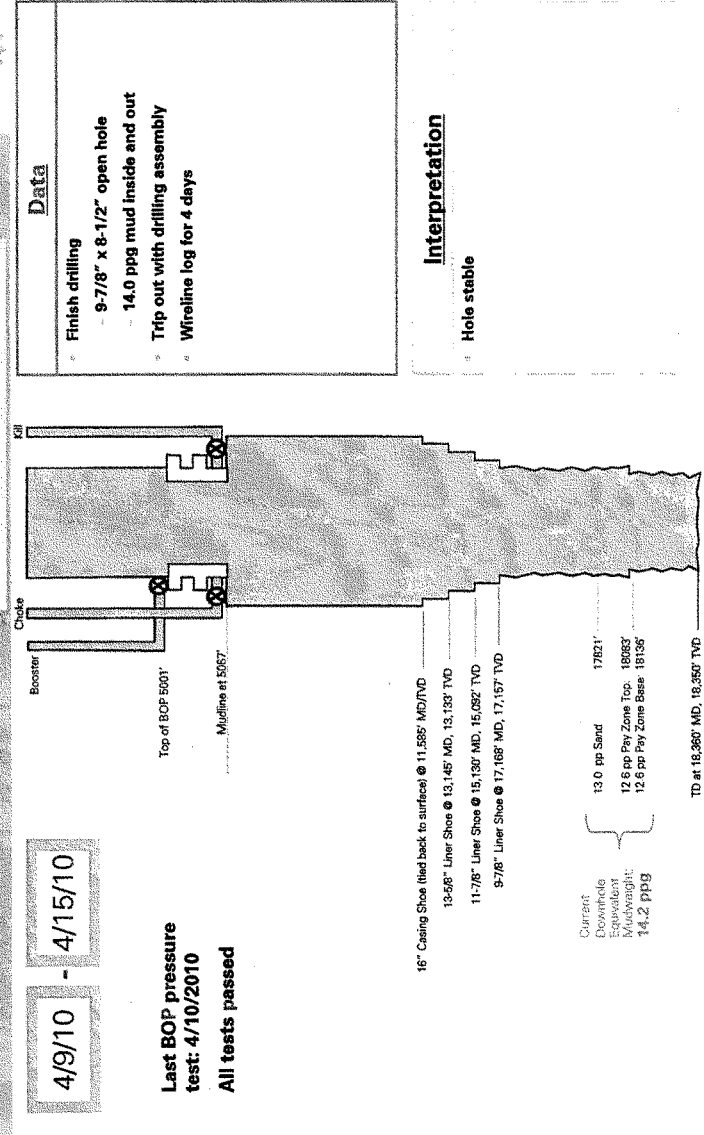
Presented May 24, 2010 in Washington D.C.

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# Finish Drilling and Complete Logging

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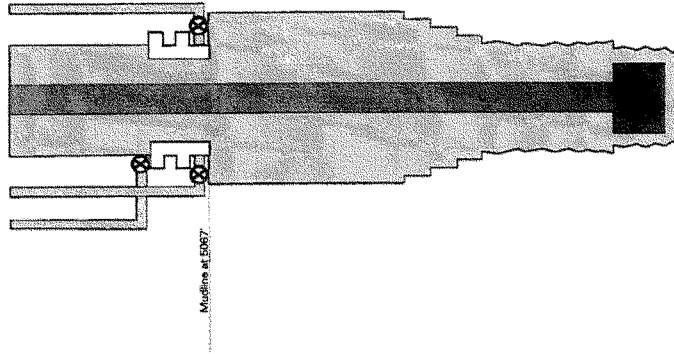
## Wiper Trip

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14:00 - 12:00  
4/16/10 - 4/17/10

Function test BOP:  
4/17/10 at 01:00

Function test diverter:  
4/17/10 at 01:30



Data
Run in hole for wiper trip
- Circulate bottoms up at TD
- Pump high vis sweep
- Monitor for gains or losses - none
- 14.0 ppg clean mud throughout before trip out
Pump out from 18360' - 14759'
- 4 flow checks during trip out - no flow

## Interpretation

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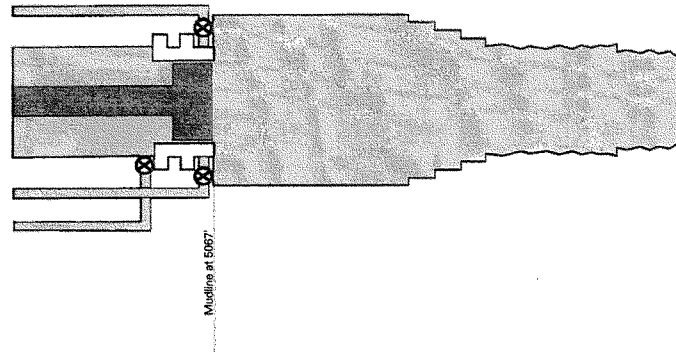
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# Retrieve Wear Sleeve

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12:00 - 00:30  
4/17/10 - 4/18/10

Function test BSR  
4/17/10 23:00



Data
<ul style="list-style-type: none"> <li>Make trip to retrieve wear sleeve</li> <li>Retrieval successful</li> </ul>

## Interpretation

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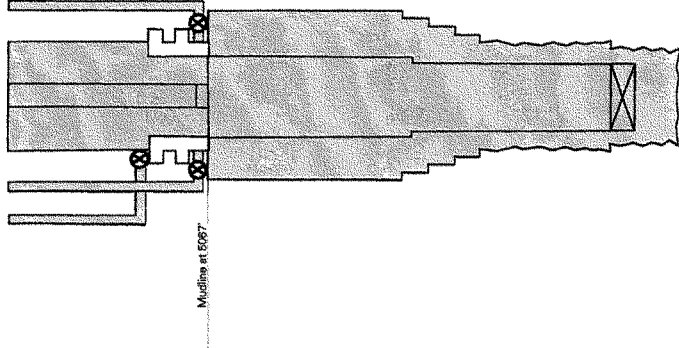
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# Run Casing - Convert Float Equipment

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00:30 - 17:30  
4/18/10 - 4/19/10



Data
Run 7" x 9-7/8" production casing
Crossover at 12487'
Float Collar at 18114'
Shoe at 18304'
56' of rat hole
Laid out three joints of 7" due to damaged threads
Saw 10k weight bobble at 18218 (only time string took weight during run)
9 attempts to convert float equipment
Sheared at 3142 psi vs 500-700 psi design

Interpretation
Circulating pressure below normal after shearing float collar

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17:30

-

00:30

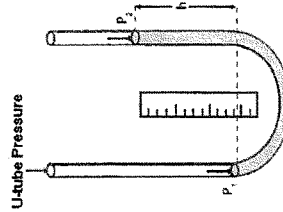
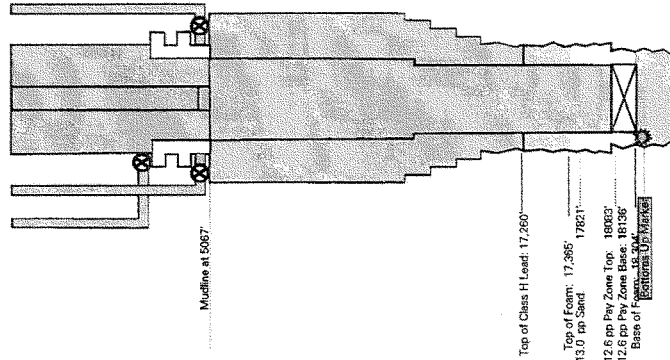
4/19/10 - 4/20/10

Cement Job

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Data
Circulate 342 bbl before cement job
Pump nitrified foam cement <ul style="list-style-type: none"><li>- Pumped 60 bbl cement</li></ul>
Estimated TOC at 17260'
Bumped plug with 1150 psi <ul style="list-style-type: none"><li>- Cement in place at 00:35</li><li>- Bled back 5 bbls to 0 psi</li><li>- Minimal calculated U-tube pressure after job (nearly balanced)</li></ul>
14.0 ppg mud in ratihole with 16.7 ppg cement in shoe track



### Interpretation

- Job pumped per plan - no cement losses observed
- Minimal U-tube may have prevented definitive float test
- Potential for contamination of cement in shoe track due to density difference between cement and mud

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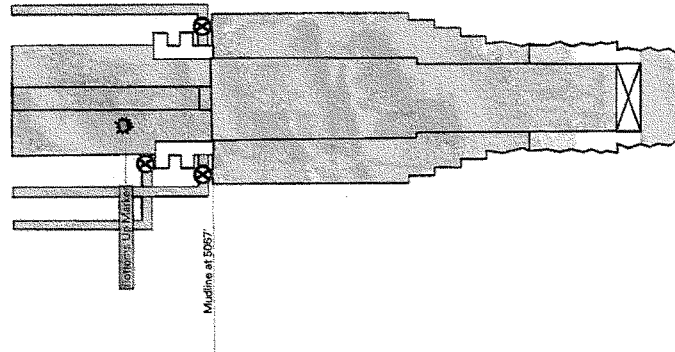
# Set Seal Assembly - Lay Down Landing String

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00:30 - 07:00

4/20/10

Close Upper VBR's to  
test seal assembly.  
Test successful



Data
<ul style="list-style-type: none"> <li>Release running tool</li> <li>Set seal assembly at 5059' to seal the 9-7/8" casing annulus</li> <li>Successful pressure test of seal assembly</li> <li>Setting and testing procedure as per plan</li> <li>Begin tripping out</li> </ul>

Interpretation
<ul style="list-style-type: none"> <li>Set and test of seal assembly is normal</li> </ul>

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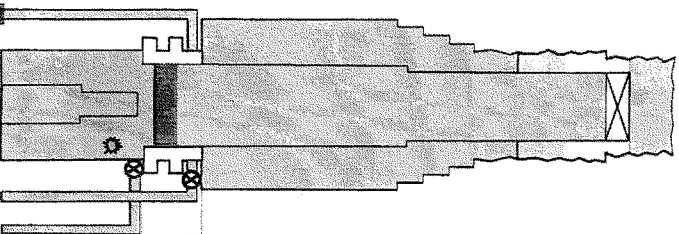


# Trip in and Casing Test

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Kill

250  
2500  
psi



07:00 - 12:00  
4/20/10

12:00 - Close BSR. Pump  
down kill line to test  
casing to 250/2500  
psi for 30 min

## Data

- Run in with tapered string for cement plug:
  - 6-5/8" x 5-1/2" x 3-1/2" drill pipe
- Stop at 4700' (above BOP)
- Close blind shear rams
- Positive test casing to 250 and 2500 psi

## Interpretation

Positive casing test is successful  
Pressures and volumes are as expected

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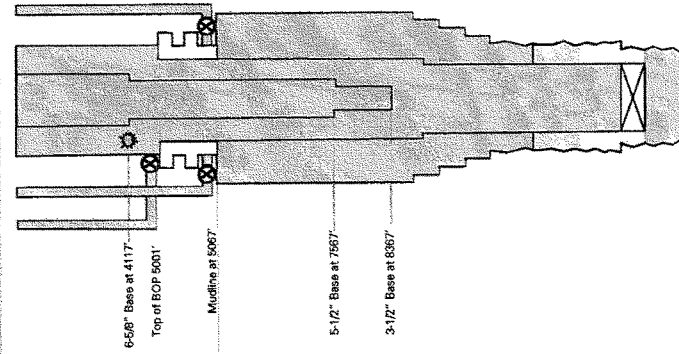


# Finish Trip in Hole

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12:00 - 15:00  
4/20/10

Data
<ul style="list-style-type: none"> <li>Finish RIH to 8367'</li> <li>Mud transfer to boat begins at 13:28</li> </ul>



## Interpretation

The approach to transferring mud may have impaired pit monitoring over next 4 hours

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## Displace Boost, Choke, and Kill Lines

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1200

psi

Choke

Booster

Mudline at 595'

15:04

15:54

4/20/10

### Data

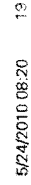
- Displaced booster line w/ seawater
- Displaced choke line with seawater
- Displaced kill line with seawater
- 1200 psi trapped in kill line

### Interpretation

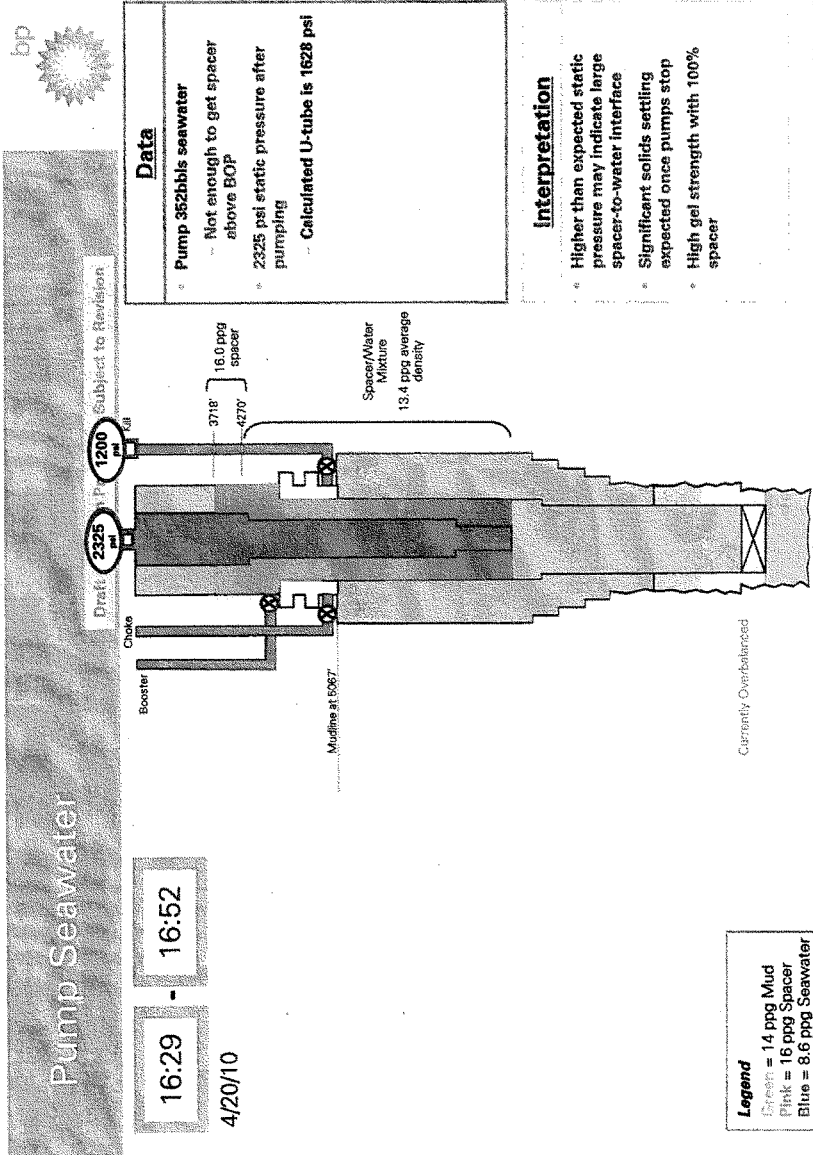
- Close booster, choke, and kill line bottom valves after displacements

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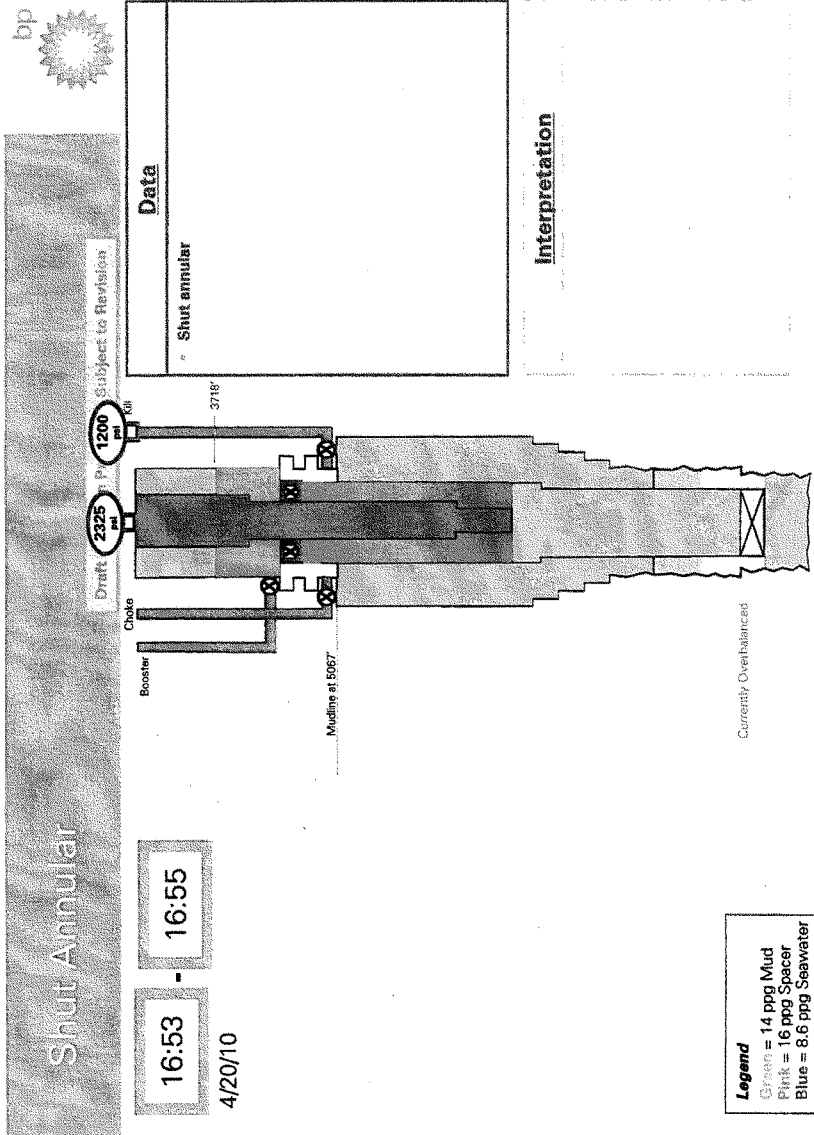


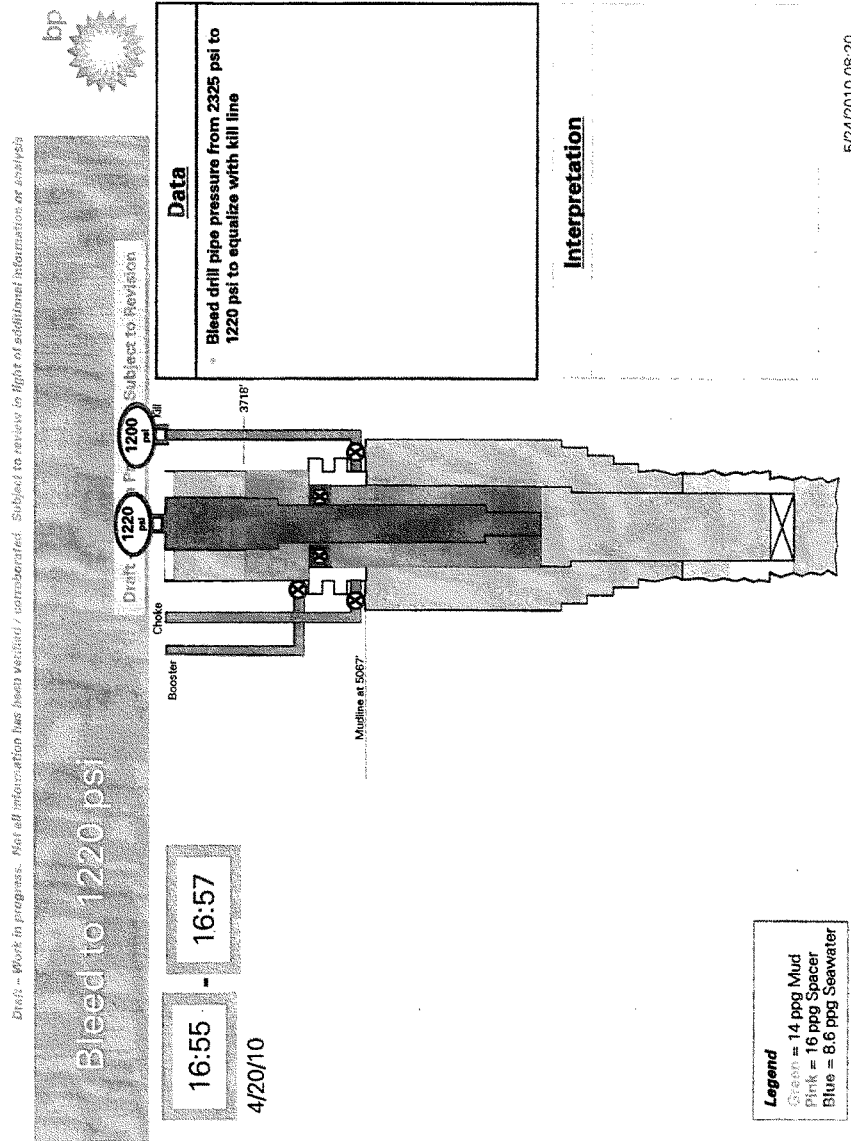


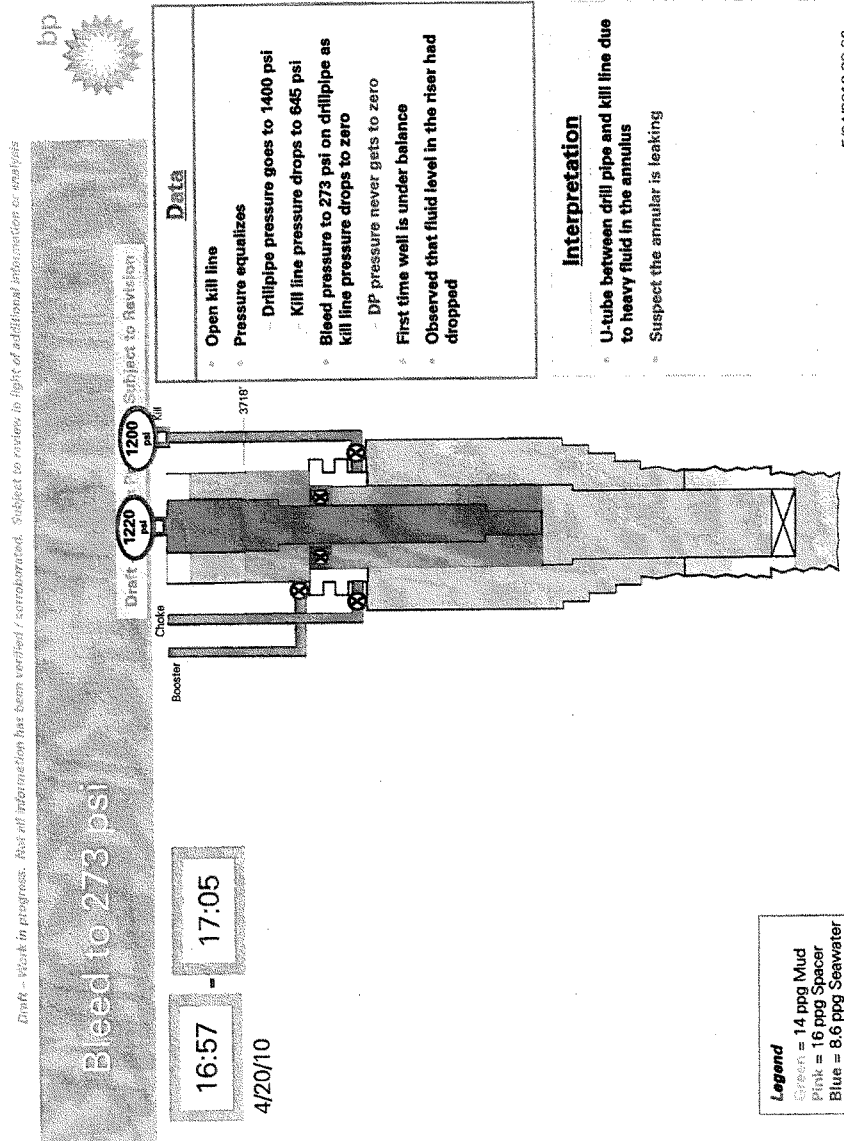
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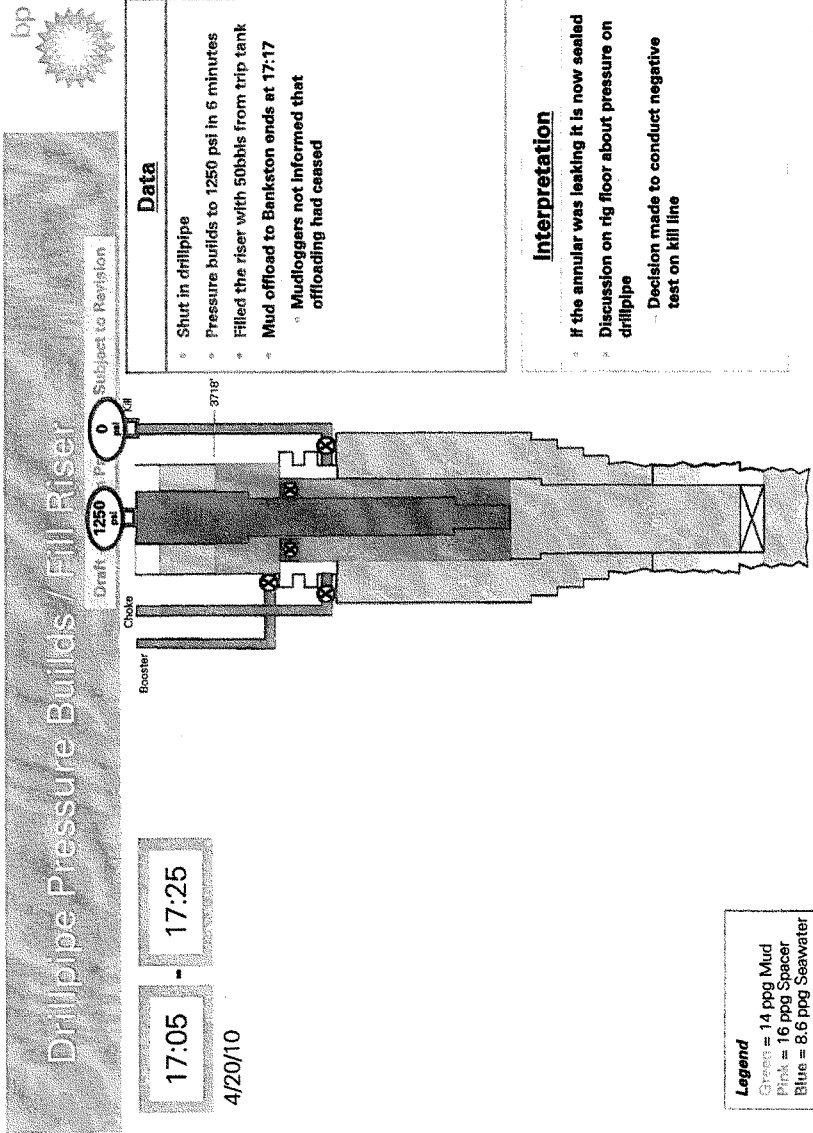
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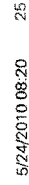


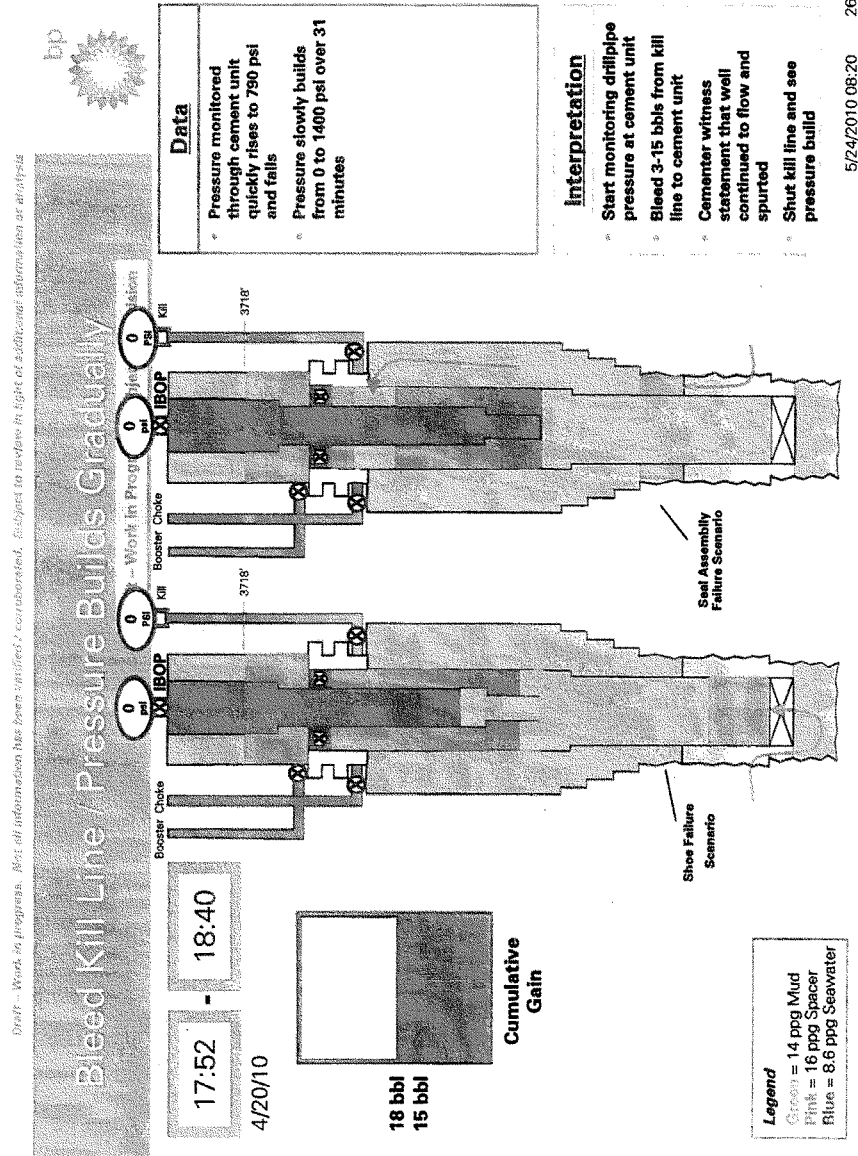




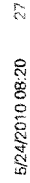
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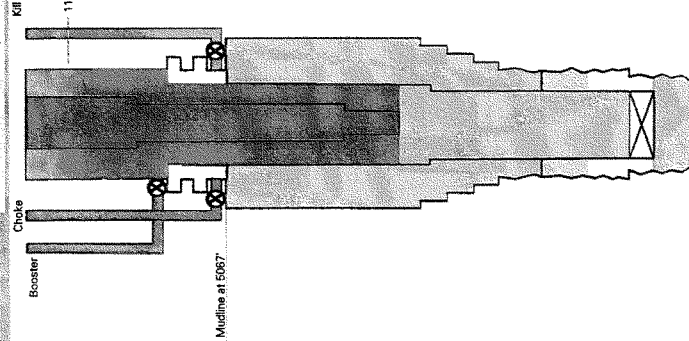


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## Displace to Seawater

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19:55 - 21:14

4/20/10

### Data

- Pumped 1304 bbl seawater
- Using rig pumps and booster
- Shut down for sheen test - spacer back
- 1017 psi on DP when shut down
- Sheen test passes
- Crew instructed to divert returns overboard

### Interpretation

- Flow out greater than flow in commencing at 20:58 while slowing pumps for spacer return
- Second indication of flow at 21:08 when pumps shutdown for sheen test
  - Pressure builds to 1263 over 5.5 minute period
  - Flow meter indicates well flowing

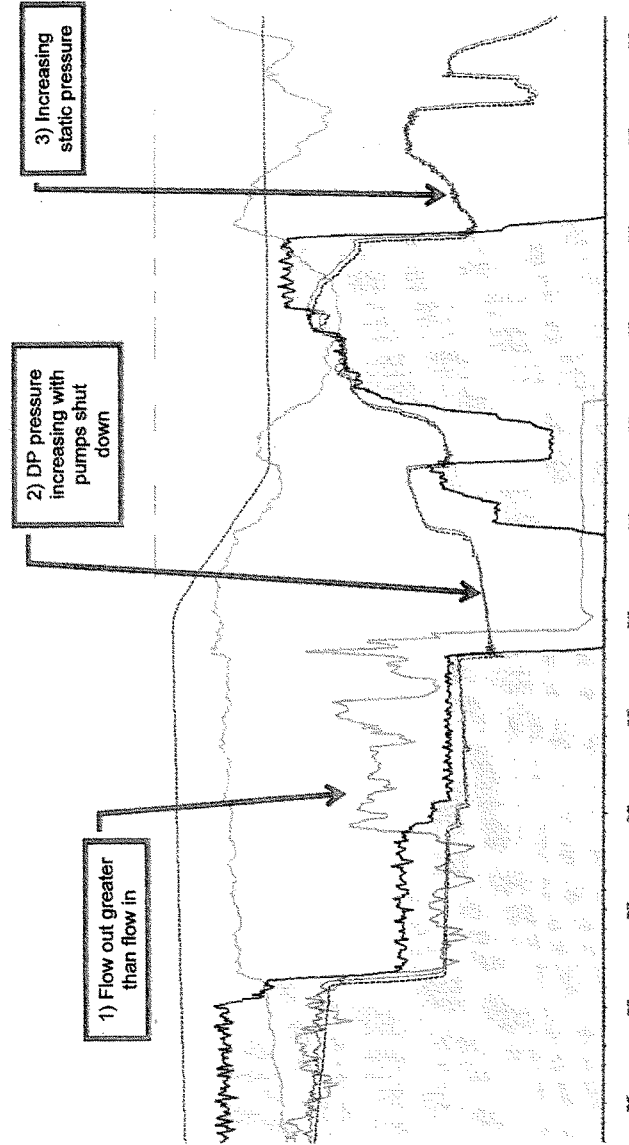
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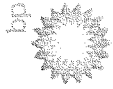
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## Three Flow Indicators

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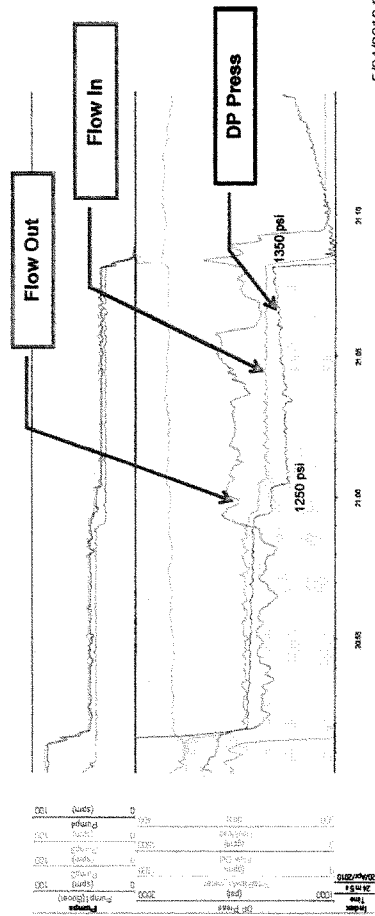
**Critical Factor 2: Flow Indication #1**  
51 minutes before explosion



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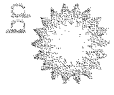
**Following final integrity test of wellbore, BOP annular was opened and well displacement of mud to seawater began:**

- Flow-out volume of mud and drillpipe pressure showed expected correlation until about 20:58
- At 20:58, pumps were slowed and the following abnormal results:
  - Drillpipe pressure increased from 1250 psi to 1350 psi
  - Flow-out volume increased instead of slowing
- Flow-out vs flow-in shows gain of approx 57 bbls over 12 minute period
- First indication of flow ~51 minutes before the explosion



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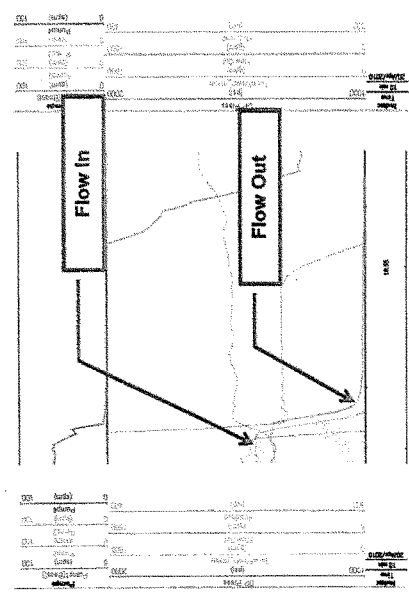
**Critical Factor 2: Flow Indication #2**  
41 minutes before explosion



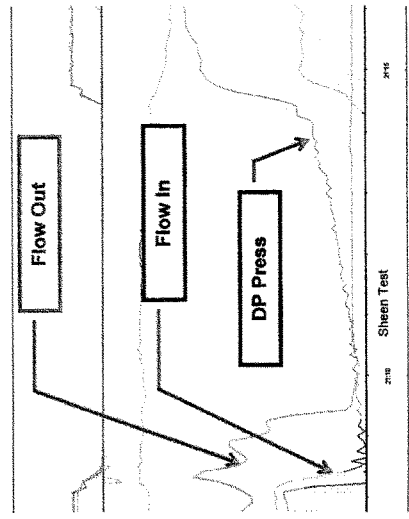
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- At 21:08 – pump shutdown as spacer observed at surface. Sheen test required.
- Flow-out should be zero, but real-time data indicates well flowing after pump shut off
- Drillpipe pressure increased from 1017 psi to 1263 psi over 5.5 minute period of sheen test

Ex) Normal Flow Back @ 16:52



Flow Back @ 21:08

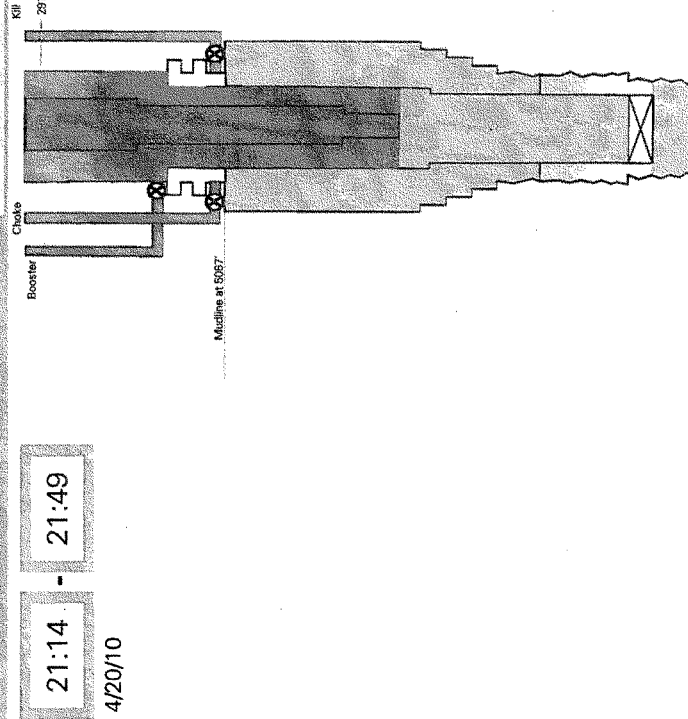


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## Resume Displacement

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### Data

- Resume displacement
  - Pump another 265 bbls
  - Returns going overboard
  - Flow meter bypassed -- unable to monitor flow out
- Pumps stop at 21:31
- Significant pressure buildup starting at 21:47
- Data lost at 21:49
- Last pressure reading 5700 psi

### Interpretation

- Pumps stop at 21:31 -- suspect problem identified with well
- 4 calls made from rig floor and Chief Mate discusses well with Toolpusher on rig floor
- Suspect explosion at 21:49
- EDS at 21:56 by Captain

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## Critical Factor 2: Flow Indication #3

18 minutes before explosion

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Sheen test passed and approval granted to discharge overboard

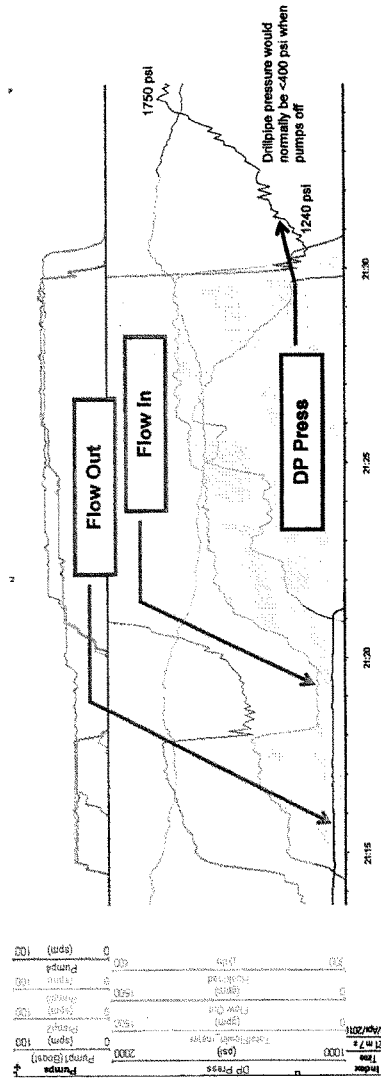
At 21:14, pumping resumed to continue displacement to seawater

At 21:31, problem observed (e.g. mud returns, abnormal pressures)

Pump abruptly shutdown

Drillpipe pressure at time of shutdown was 1240 psi. Increased to 1750 psi over next 6 minutes.

Flow-out data not available due to fluids being discharged directly overboard (bypasses flowmeter)



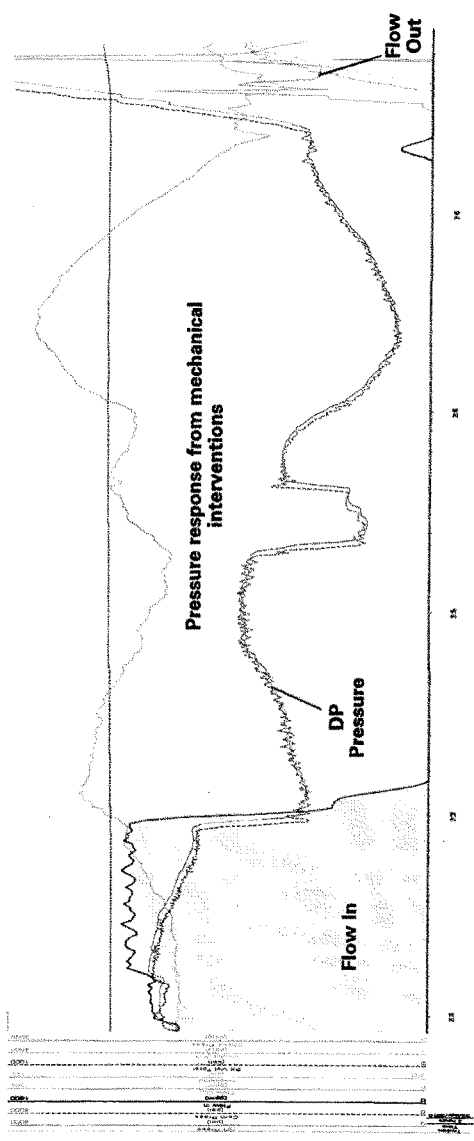
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# Final 18 Minutes

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Data lost, suspect explosion







## BOP-EDS(Emergency Disconnect) Function

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- EDS was activated from Bridge after explosion at 21:56 based on witness statements
  - Activation time for EDS is 46 seconds
  - The EDS function can be activated from the surface (either the bridge or drill floor).
  - Function is to seal the well and disconnect the vessel from the well.
- The EDS sequence:
  - Operator on rig pushes the EDS button
  - Blind shear rams close cutting drill pipe and sealing the well
  - Choke and kill line valves are closed and lines unlatched
  - LMRP is unlatched and disconnects
  - The EDS sequence is now complete and rig is free to move away from well.
- In this event there is no evidence that the EDS activated, there was still significant flow from the well and the LMRP remained connected to the BOP.



- The AMF would have been expected to seal the well after loss of the three functions (hydraulics, communications and power) from the surface at some point between the explosions and the rig sinking.
- The AMF is an emergency sequence that activates the blind shear rams to seal the well.
  - Activation time for the AMF is 37 seconds
- The AMF sequence:
  - The BOP senses the loss of hydraulics, communications, power from the surface (all three need to be lost) and arms the AMF.
  - The AMF Activates the Blind shear rams cutting drill pipe and sealing the well.
  - Note that the AMF does not disconnect the LMRP.
- There is no evidence to suggest that the AMF in this case activated effectively to seal the well.

## BOP - ROV Hot Stab Intervention and Surveys post incident

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- Post the explosion, numerous ROV hot stab interventions were conducted in an attempt to activate
  - Blind Shear rams
  - Variable Pipe rams
  - LMRP Disconnect (Auto shear cut in attempt to activate blind shear rams)
- ROV survey found a number of hydraulic leaks on the system
- ROV identified hydraulic system errors such that test rams were being activated instead of lower variable rams
- ROV identified undocumented modifications to the hydraulic control system; the extent of these modifications is unknown at this time
- Non-destructive examination using ultra-sonics and gamma source were conducted to try and detect position of rams and locks
  - There are indications that the BOP blind shear and variable rams have moved and may be in the locked position, final determination may be possible with the recovery of the BOP

## Immediate Lines of Inquiry

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### Maintenance

Were the BOP and control system properly maintained?

### Testing

Was the BOP properly tested within regulation; were the primary emergency systems EDS, AMF, Autoshear and ROV Hot Stabs tested regularly?

### Modifications

Are there as built diagrams of all modifications; is there a record of acceptance testing prior to running the BOP?

Did modifications conducted over life of BOP impact functionality?

### Leaks

Did hydraulic leaks found during ROV interventions and previously noted in Rig log impact functionality?

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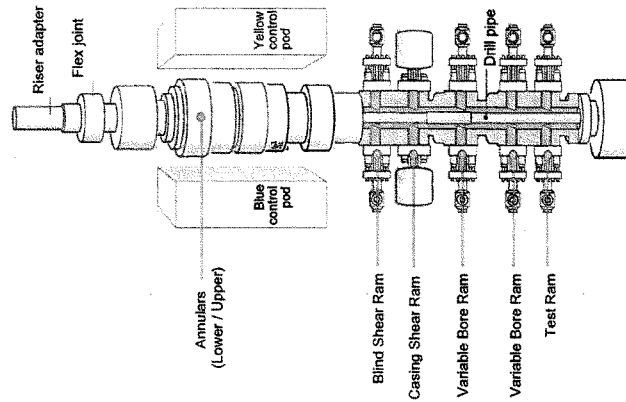


## Backup material

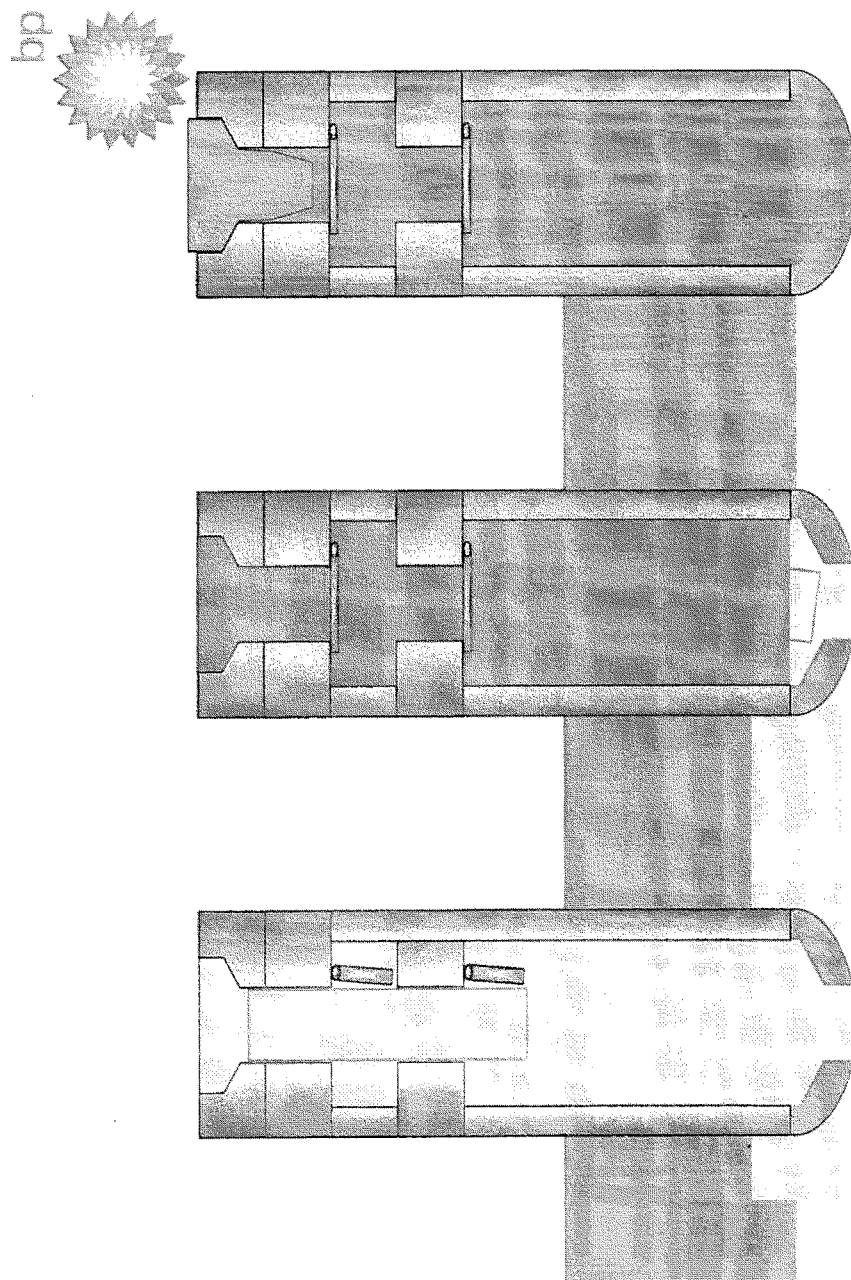


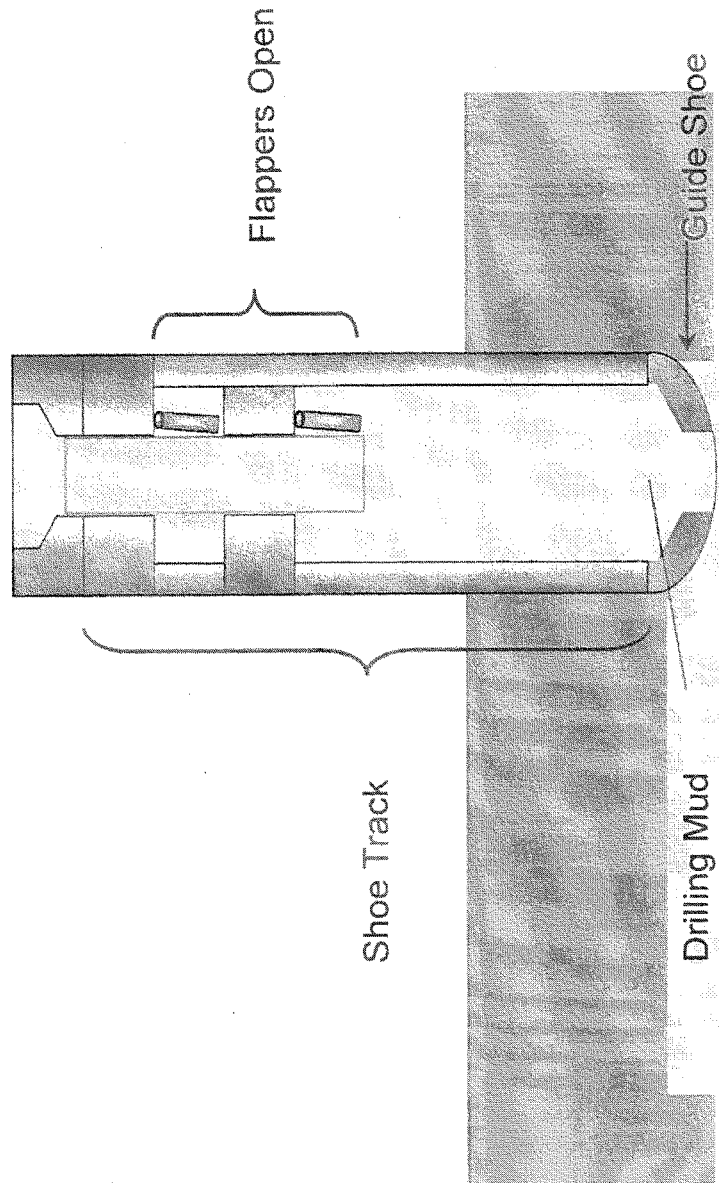
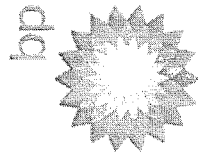
## BOP Function Description

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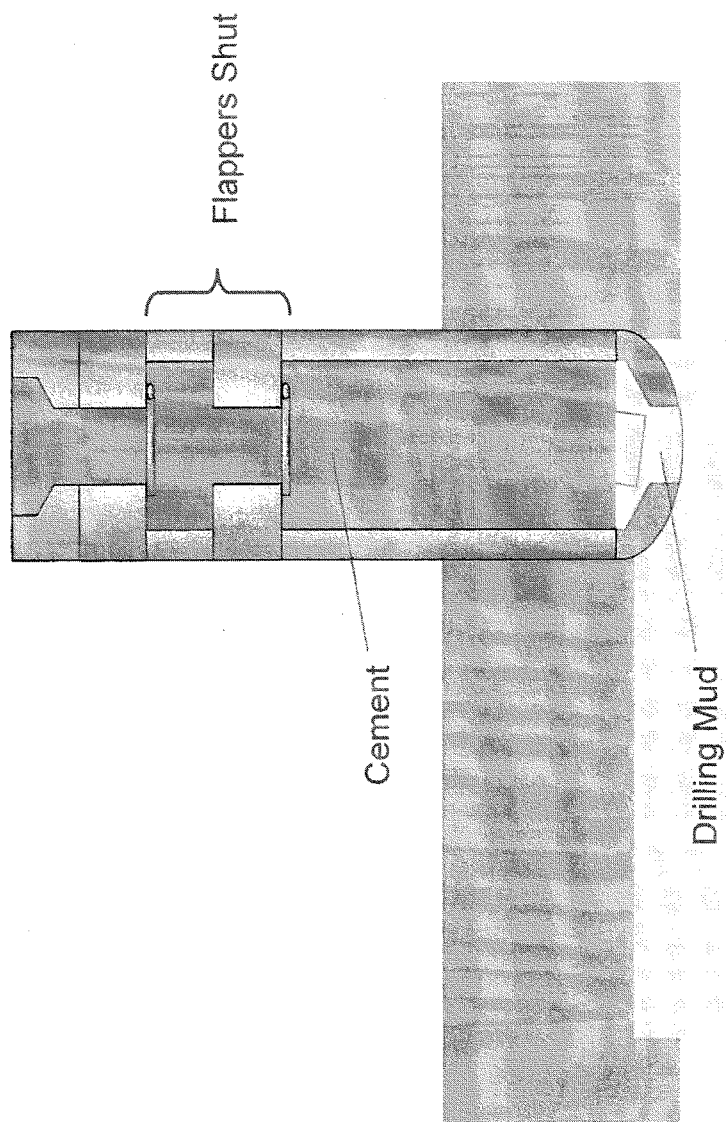
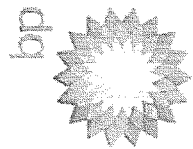


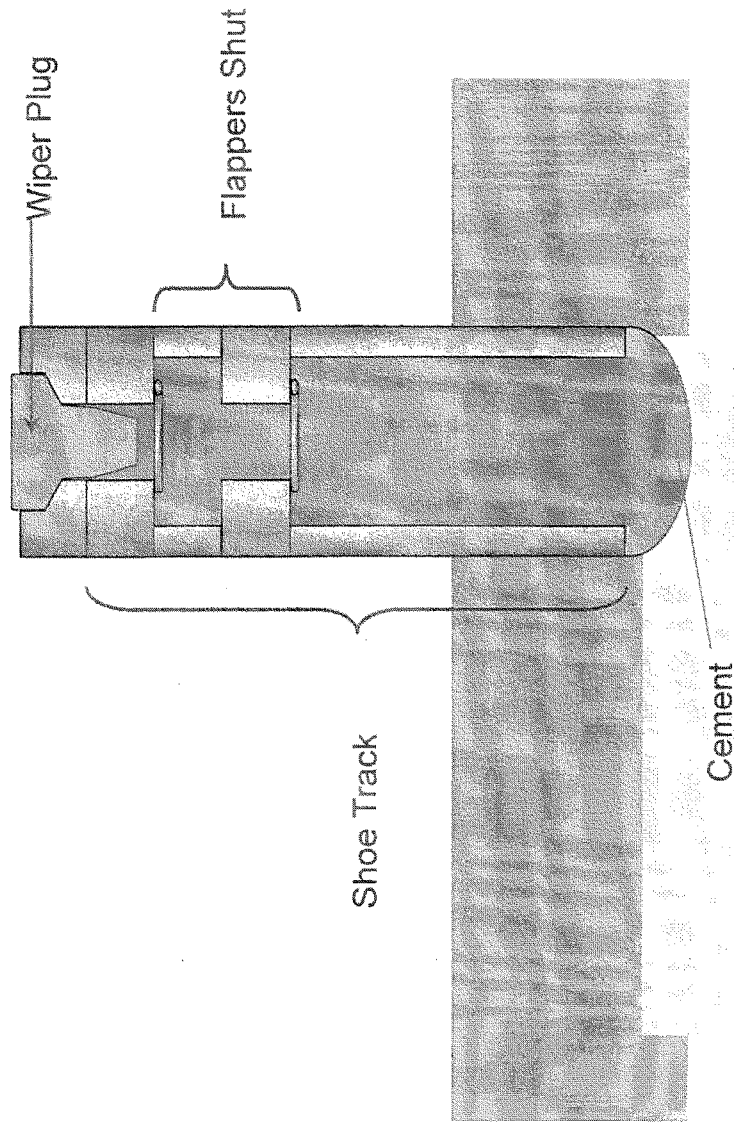
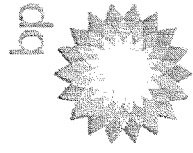
- **UAP Upper Annular Preventer** used in normal drilling operations for well shut-in rated 10K.
- **LAP Lower Annular Preventer with Casing Stripping Element.** Used for casing stripping purposes, down rated to lower wellbore retaining pressure 5K.
- **BSR Blind Shear Rams** Cuts drill pipe and seals the well.
- **CSR Casing Shear Rams** Non-Sealing, cuts drill pipe and casing; is not designed to seal the wellbore.
- **UPR Upper Pipe Rams** Ram packers can close on a range of drill pipe from 3 1/2" OD to 6 5/8" OD and seal up to 15K wellbore pressure.
- **MPR Middle Pipe Rams** Ram packers can close on a range of drill pipe from 3 1/2" OD to 6 5/8" OD and seals up to 15K wellbore pressure, can also be stripped through to hang-off drill pipe up 600K
- **LPR Lower Pipe Rams** . Test Ram seals up to 15K pressure from above.









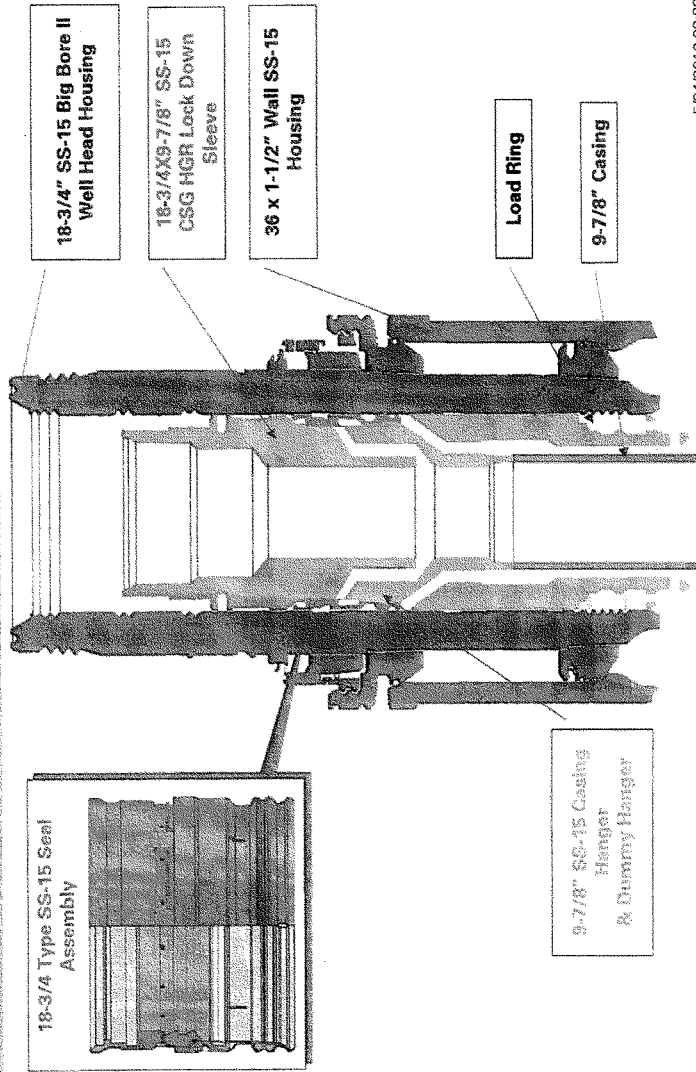


Draft - Work in progress. All information has been verified / coordinated. Subject to review in light of additional information or analysis.



## Seal Assembly With Casing Hanger Lock Down Sleeve

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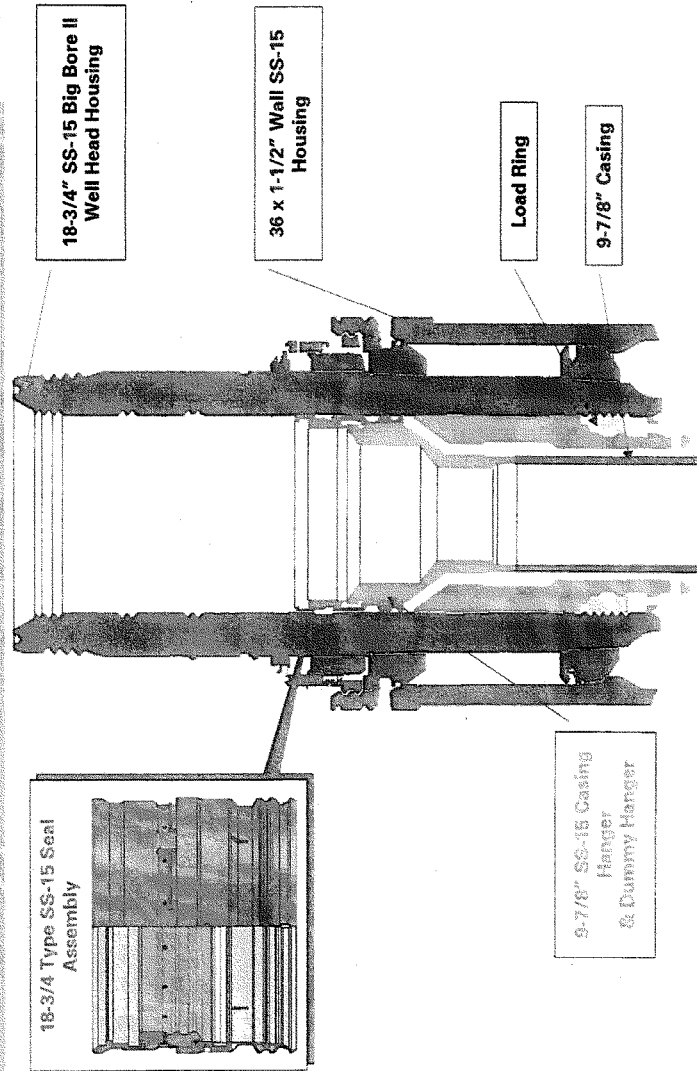


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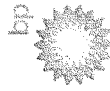
bp

## Seal Assembly Without Casing Hanger Lock Down Sleeve

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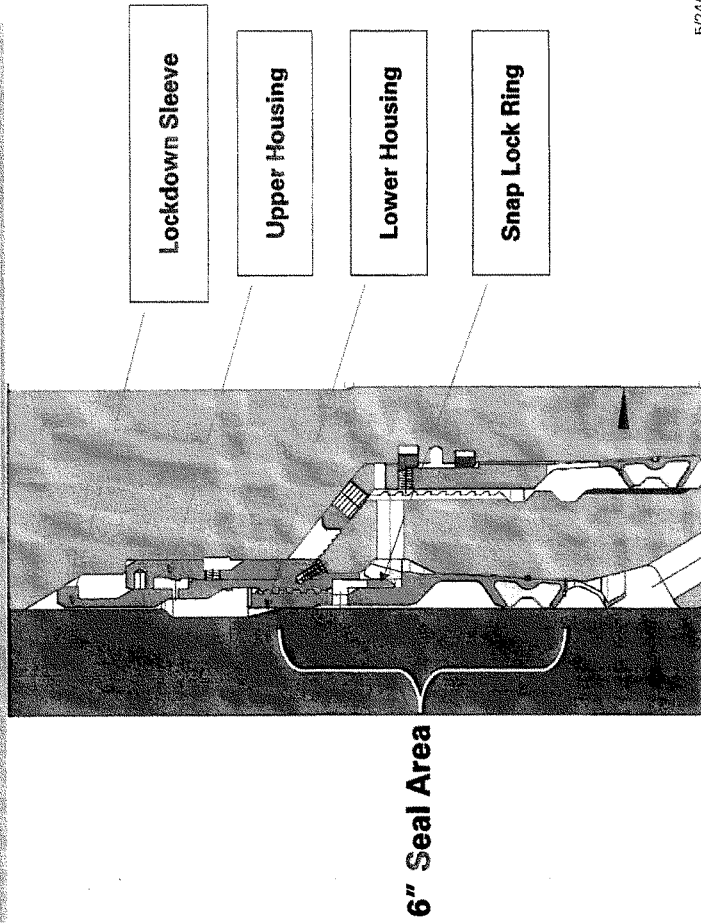


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## Seal Assembly Cross Sectional View

Draft - Work in Progress. Subject to Revision





## Background to Incident

Draft - Work in Progress. Subject to Revision.

28 MAY 2010

### Macondo Prospect MC 252 ILX well - total depth 18,360'

- Challenging well to drill but comfortably within experience range
- The well was originally spud with the Marianas Rig on Oct 6<sup>th</sup> 2009 - The Marianas sustained damages during Hurricane Ida on Nov 8<sup>th</sup> and commenced tow to shipyard for repairs on Nov 26<sup>th</sup>
- The Deep Water Horizon re-entered the well on Feb 9<sup>th</sup> 2010 at the 18" casing point
- Both rigs are Transocean owned
- The well encountered commercial hydrocarbons - plan was to temporarily suspend the well for future completion as a production well

### Deepwater Horizon

- On contract to BP since 2001
- Proven track record in deepwater exploration drilling (just came off record Tiber exploration well)

### Event

- Incident occurred during the suspension phase of the well - 2 hrs after completing an integrity test on the well
- At the time of the incident drilling fluid was being displaced from the well with seawater in preparation for setting the final cement plug

MICHAEL C. BURGESS, M.D.  
26TH DISTRICT, TEXAS

**ENERGY AND COMMERCE**

SUBCOMMITTEES:  
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HEALTH:

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**JOINT ECONOMIC COMMITTEE**

CONGRESSIONAL HEALTH CARE CAUCUS,  
CHAIRMAN



*Congress of the United States*

*House of Representatives*

Washington, DC 20513-4326

May 24, 2010

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LTG Robert L. Van Antwerp  
Commanding General and Chief of Engineers  
Headquarters, US Army Corps of Engineers  
441 G. Street, NW  
Washington, DC 20314-1000

LTG Robert L. Van Antwerp:

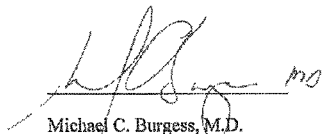
As oil from the Deepwater Horizon oil spill begins to reach the fragile marshes and estuaries of the Louisiana coastline, it is imperative that the federal government do everything possible to stop the flow of oil and act immediately to protect the natural resources along Louisiana's coast.

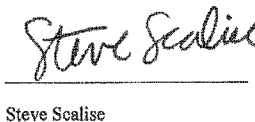
On May 23, 2010, the Associated Press reported that Louisiana Governor Bobby Jindal, frustrated with Army Corps of Engineers delays over environmental impact studies, will move forward unilaterally in building sand barriers to protect the coastline. Gov. Jindal petitioned the U.S. Army Corps of Engineers the week of May 10 for approval to dredge and build sand barriers to protect the wetlands, but the USACE has yet to grant approval of that request, and oil continues to damage areas of Louisiana's coasts.

We support Gov. Jindal's efforts to protect the fragile ecosystems and natural resources that are of critical importance not only to Louisiana but also to the entire national economy. And we hope the Army Corps of Engineers will expedite any environmental studies so that the Corps may assist the Governor in protecting these valuable resources.

The oil spill in the Gulf of Mexico is a serious tragedy, resulting in the loss of 11 lives onboard the exploratory rig. Every resource should be utilized to stem this spill and protect the nation's coastlines. We appreciate your assistance in this matter.

Sincerely,

  
Michael C. Burgess, M.D.

  
Steve Scalise

MICHAEL C. BURGESS, M.D.  
20th District, Texas

**ENERGY AND COMMERCE**

SUBCOMMITTEE:  
OVERSIGHT AND INVESTIGATIONS  
RANKING MEMBER  
HEALTH  
ENERGY AND ENVIRONMENT

**JOINT ECONOMIC COMMITTEE**

CONGRESSIONAL HEALTH CARE CAUCUS,  
CHAIRMAN



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May 26, 2010

President Barack Obama  
The White House  
1600 Pennsylvania Ave, NW  
Washington, DC 20500

Dear Mr. President,

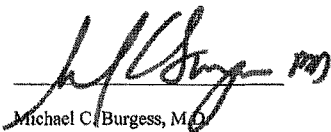
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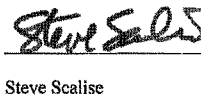
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We support Gov. Jindal's efforts to protect the fragile ecosystems and natural resources that are of critical importance not only to Louisiana but also to the entire national economy. And we urge the USACE to act swiftly so that they may assist the Governor in protecting these valuable resources.

The oil spill in the Gulf of Mexico is a serious tragedy, resulting in the loss of 11 lives onboard the exploratory rig. Every resource should be utilized to stem this spill and protect the nation's coastlines. We appreciate your assistance in this matter.

Sincerely,

  
Michael C. Burgess, M.D.

  
Steve Scalise



HENRY A. WAXMAN, CALIFORNIA  
CHAIRMAN

JOE BARTON, TEXAS  
RANKING MEMBER

ONE HUNDRED ELEVENTH CONGRESS  
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**House of Representatives**  
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WASHINGTON, DC 20515-6115

Majority (202) 225-2827  
Minority (202) 225-3841

June 22, 2010

Rear Admiral James Watson  
Deputy, Unified Area Command  
United States Coast Guard  
2100 Second Street, SW  
Washington, DC 20593-7101

Dear Rear Admiral Watson:

Thank you for appearing before the Subcommittee on Energy and Environment on May 27, 2010, at the hearing entitled "Combating the BP Oil Spill."

Pursuant to the Committee's Rules, attached are written questions for the record directed to you from certain Members of the Committee. In preparing your answers, please address your response to the Member who submitted the questions.

Please provide your responses by July 12, 2010, to Earley Green, Chief Clerk, via e-mail to [Earley.Green@mail.house.gov](mailto:Earley.Green@mail.house.gov). Please contact Earley Green or Jennifer Berenholz at (202) 225-2927 if you have any questions.

Sincerely,



Henry A. Waxman  
Chairman

Attachment

<b>Question#:</b>	1
<b>Topic:</b>	boom
<b>Hearing:</b>	Combating the BP Oil Spill
<b>Primary:</b>	The Honorable Roy Blunt
<b>Committee:</b>	ENERGY & COMMERCE (HOUSE)

**Question:** I've recently introduced legislation that would hopefully address inefficiency issues regarding the availability of boom. As I understand it, state officials requested three weeks ago 5 million feet of boom from the Coast Guard, however as of May 27th, only 800,000 feet have been delivered, and less than 700,000 feet are in the water. Why is this taking so long to deploy these resources considering the urgent need for containment?

Do these resources exist and who is responsible for getting them delivered to the states that desperately need them?

**Response:** The Unified Area Command allocates boom to protect sensitive areas in accordance with Area Contingency Plans and needs of the response. The Unified Area Command is procuring double the amount of boom required in Area Contingency Plans. The Incident Commanders are committed to working closely with the impacted Gulf States to determine needed quantities of boom and protect state shore lines, marshes and waterways.

